CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

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ORDER R4-2017-XXXX
NPDES NO. CA0064297

WASTE DISCHARGE REQUIREMENTS FOR THE CITY OF REDONDO BEACH, SEASIDE LAGOON

The following Discharger is subject to waste discharge requirements (WDRs) set forth in this Order:

Table 1. Discharger Information

Discharger	City of Redondo Beach
Name of Facility	Seaside Lagoon
Facility Address	200 Portofino Way
	Redondo Beach, CA 90277
	Los Angeles County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Swimming Lagoon Discharge	33.8441º	-118.3946º	King Harbor

Table 3. Administrative Information

This Order was adopted on:	September 7~~June 1~~, 2017
This Order shall become effective on:	November ~~October~~ 1, 2017
This Order shall expire on:	October 31, ~~September 30,~~ -2022
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	180 days prior to the Order expiration date
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows:	Minor

Tentative: December 7, 2016
Revised: April 5, 2017
Revised: May 19, 2017
Revised : July 13, 2017

I, Samuel Unger, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on September 7~~June 1~~, 2017.

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Samuel Unger, P.E., Executive Officer

REVISED TENTATIVE

CONTENTS

TABLES

ATTACHMENTS

REVISED TENTATIVE

I. FACILITY INFORMATION

Information describing the Seaside Lagoon (Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

The California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board), finds:

A. Legal Authorities. This Order serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit for point source discharges from this facility to surface waters.

B. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E and G through I are also incorporated into this Order.

C. Notification of Interested Parties. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.

D. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all evidence and comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED that this Order supersedes Order R4-2010-0185 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger is authorized to discharge from the identified facility and outfalls into water of the United States and shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for past violations of the previous Order.

III. DISCHARGE PROHIBITIONS

A. Wastes discharged shall each be limited to a maximum of 3.07million gallons per day (MGD) of Lagoon wastewater as described in the Fact Sheet (Attachment F). The discharge of wastes from accidental spills or other sources is prohibited.

B. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, King Harbor, or other waters of the State, are prohibited.

C. Neither the treatment nor the discharge of pollutants shall create a condition of pollution, contamination, or a nuisance as defined by Section 13050 of the Water Code.

D. Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.

REVISED TENTATIVE

E. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or the State Water Resources Control Board (State Water Board) as required by the Federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Federal CWA, and amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

F. Discharge of oil or any residuary product of petroleum to waters of the State, except in accordance with waste discharge requirements or other provisions of Division 7 of the California Water Code is prohibited.

G. The discharge of any radiological, chemical, or biological warfare agent into the waters of the state is prohibited under Water Code section 13375.

H. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP (Attachment E):

Table 4. Effluent Limitations at Discharge Point 001

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Conventional Pollutants					
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	mg/L	20	30	--	--
	lbs/day[1]	512	768	--	--
Oil and Grease	mg/L	10	15	--	--
	lbs/day[1]	256	384	--	--
Total Suspended Solids (TSS) [4]	mg/L	50	75	--	--
	lbs/day[1]	1,280	1,920	--	--
pH	Standard units	--	--	6.5	8.5
Non-Conventional Pollutants					
Chlorine, Total Recoverable	µg/L	2	8	--	--
	lbs/day[1]	0.05	0.2	--	--
Chronic Toxicity[2]	Pass or Fail, % Effect (TST)	Pass[3]	Pass or % Effect <50	--	--
Temperature	Degrees F	--	--	--	86

REVISED TENTATIVE

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Turbidity	NTU	50	75	--	--
Priority Pollutants					
Arsenic, Total Recoverable [4]	µg/L	26	66	--	--
	lbs/day[1]	0.67	1.74	--	--
Cadmium, Total Recoverable [4]	µg/L	7.7	15	--	--
	lbs/day[1]	0.2	0.4	--	--
Copper, Total Recoverable[4]	µg/L	1.9	5.8	--	--
	lbs/day[1]	0.05	0.15	--	--
Mercury, total Recoverable	µg/L	0.051	0.10	--	--
	lbs/day[1]	0.0013	0.0025	--	--
Selenium, total Recoverable [4]	µg/L	56	122	--	--
	lbs/day[1]	1.4	3.1	--	--
Silver, Total Recoverable [4]	µg/L	0.92	2.2	--	--
	lbs/day[1]	0.024	0.06	--	--
Thallium, Total Recoverable[4]	µg/L	6.3	13	--	--
	lbs/day[1]	0.16	0.33	--	--
Zinc, Total Recoverable [4]	µg/L	34	95	--	--
	lbs/day[1]	0.9	2.4	--	--
Cyanide, Total (as CN)	µg/L	0.50	1.0	--	--
	lbs/day[1]	0.013	0.025	--	--
Total Coliform	MPN/100 ml	1,000[5,6]	10,000	--	--
Fecal Coliform	MPN/100 ml	200[6,7]	400	--	--
Enterococcus	MPN/100 ml	35[6,8]	104	--	--

[1] Mass loading limitations are based on a maximum flow of 3.07MGD and are calculated as follows: Flow (MGD) x concentration (mg/L) x 8.34 (conversion factor) = lbs/day.

[2] The median monthly effluent limitation (MMEL) shall be reported as "Pass" or "Fail" The maximum daily effluent limitation (MDEL) shall be reported as "Pass" or "Fail" and "% Effect". The MMEL for chronic toxicity shall only apply when there is a discharge more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests are required when one toxicity test results in "Fail."

[3] This is an MMEL.

[4] If the influent water pollutant concentration (measured at influent to the Lagoon) does not exceed the average monthly limitation then the limitations are applied as noted in the Table 4. If the influent water pollutant concentration exceeds the average monthly limitation but does not exceed the maximum daily limitation then compliance with the average monthly limitation will be determined based on intake water credits and compliance with the maximum daily limitation is applied as noted in the Table 4. If the influent water pollutant concentration exceeds the maximum daily limitation then compliance with both the average monthly and the maximum daily will be determined based on intake water credits.

[5] The geometric mean density of total coliform organisms shall be less than 1,000 per 100 ml (10 per ml). No single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml). Also, the total coliform density shall not exceed 1,000 per 100 ml if the ratio of fecal to total coliform exceeds 0.1.

REVISED TENTATIVE

[6] The geometric mean values should be calculated based on a statistically sufficient number of samples (generally not less than 5 samples equally spaced over a 30-day period). If any of the single sample limits are exceeded, the Regional Water Board may require repeat sampling on a daily basis until the sample falls below the single sample limit in order to determine the persistence of the exceedance. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

[7] The fecal coliform density for any 30-day period, shall not exceed a geometric mean of 200 per 100 ml (2 per ml). No single sample when verified by a repeat sample taken within 48 hours shall exceed 400 per 100 ml (4 per ml).

[8] The geometric mean enterococcus density of the discharge shall not exceed 35 organisms per 100 ml for a 30-day period. No single sample when verified by a repeat sample taken within 48 hours shall exceed 104 per 100 ml.

B. Land Discharge Specifications

Not applicable

C. Recycling Specifications

Not applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

The discharge shall not cause the following in King Harbor:

1. The normal ambient pH to fall below 6.5 nor exceed 8.5 units nor vary from normal ambient pH levels by more than 0.2 units.
2. Surface water temperature to rise greater than 5º F above the natural temperature of the receiving waters at any time or place. At no time shall the temperature be raised above 86º F as a result of waste discharged.
3. The concentration of dissolved oxygen to fall below 5.0 mg/L at any time, and the median dissolved oxygen concentration for any three consecutive months to be less than 80 percent of the dissolved oxygen content at saturation.
4. Water Contact Standards

   In marine water designated for water contact recreation (REC-1), the waste discharged shall not cause the following bacterial standards to be exceeded in the receiving water.

   a. Rolling 30-day Geometric Mean Limits

      i. Total coliform density shall not exceed 1,000/100 ml.

      ii. Fecal coliform density shall not exceed 200/100 ml.

      iii. Enterococcus density shall not exceed 35/100 ml.

   b. Single Sample Maximum (SSM)

      i. Total coliform density shall not exceed 10,000/100 ml.

      ii. Fecal coliform density shall not exceed 400/100 ml.

      iii. Enterococcus density shall not exceed 104/100 ml.

5. Exceedance of the total ammonia (as N) concentrations specified in the Regional Water Board Resolution No. 2004-022. Resolution No. 2004-022 revised the ammonia water quality objectives for inland surface waters not characteristic of freshwater in the 1994

REVISED TENTATIVE

Basin Plan, to be consistent with USEPAs "*Ambient Water Quality Criteria for Ammonia (Saltwater) - 1989*."

6. The presence of visible, floating, suspended or deposited macroscopic particulate matter or foam.
7. Oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the receiving water or on objects in the water.
8. Suspended or settleable materials, chemical substances or pesticides in amounts that cause nuisance or adversely affect any designated beneficial use.
9. Toxic or other deleterious substances in concentrations or quantities which cause deleterious effects on aquatic biota, wildlife, or waterfowl or render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
10. Accumulation of bottom deposits or aquatic growths.
11. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.
12. The presence of substances that result in increases of BOD that adversely affect beneficial uses.
13. Taste or odor-producing substances in concentrations that alter the natural taste, odor, and/or color of fish, shellfish, or other edible aquatic resources; cause nuisance; or adversely affect beneficial uses.
14. Alteration of turbidity, or apparent color beyond present natural background levels.
15. Damage, discolor, or formation of sludge deposits on flood control structures or facilities, or overloading of the design capacity.
16. Degradation of surface water communities and populations including vertebrate, invertebrate, and plant species.
17. Problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.
18. Nuisance, or adversely affect beneficial uses of the receiving water.
19. Violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or State Water Board. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board will revise or modify this Order in accordance with such standards.

B. Groundwater Limitations

Not applicable

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all Standard Provisions included in Attachment D.
2. The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:

REVISED TENTATIVE

a. This Order may be modified, revoked, reissued, or terminated in accordance with the provisions of 40 C.F.R., sections 122.44, 122.62, 122.63, 122.64, 125.62 and 125.64. Causes for taking such actions include, but are not limited to: failure to comply with any condition of this Order; endangerment to human health or the environment resulting from the permitted activity; or acquisition of newly-obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the Discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

b. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management programs developed to comply with NPDES permits issued by the Regional Water Board to local agencies.

c. A Discharge of wastes to any point other than specifically described in this Order and permit is prohibited and constitutes a violation thereof.

d. The provisions of this order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

e. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to sections 301, 302, 303(d), 304, 306, 307, 316, 318, 405, and 423 of the Federal CWA and amendments thereto.

f. These requirements do not exempt the operator of the waste disposal facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste disposal facility, and they leave unaffected any further restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.

g. Oil or oily material, chemicals, refuse, or other pollutionable materials shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.

h. A copy of these waste discharge specifications shall be maintained at the discharge facility so as to be available at all times to operating personnel.

i. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

   i. Violation of any term or condition contained in this Order;

   ii. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;

   iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

j. If there is any storage of hazardous or toxic materials or hydrocarbons at this facility and if the facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.

k. The Discharger shall notify the Regional Water Board not later than 120 days in advance of implementation of any plans to alter production capacity of the product line of the manufacturing, producing or processing facility by more than ten percent.

REVISED TENTATIVE

Such notification shall include estimates of proposed production rate, the type of process, and projected effects on effluent quality. Notification shall include submittal of a new report of waste discharge and the appropriate filing fee.

l. The Discharger shall file with the Regional Water Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.

m. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.

n. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify this Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Regional Water Board.

o. The Water Code provides that any person who violates a waste discharge requirement or a provision of the Water Code is subject to civil penalties of up to $5,000 per day, $10,000 per day, or $25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to $10 per gallon per day or $25 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.

Violation of any of the provisions of the NPDES program or of any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.

p. The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to waters of the United States, is prohibited unless specifically authorized elsewhere in this permit or another NPDES permit. This requirement is not applicable to products used for lawn and agricultural purposes.

q. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream that ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.

r. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to the planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

i. Name and general composition of the chemical,

ii. Frequency of use,

iii. Quantities to be used,

iv. Proposed discharge concentrations, and

v. U.S. EPA registration number, if applicable.

s. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other

REVISED TENTATIVE

enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

t. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Wat. Code § 1211.)

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E.

C. Special Provisions

1. Reopener Provisions

a. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal CWA, and amendments thereto, the Regional Water Board may revise and modify this Order in accordance with such more stringent standards.

b. This Order may be reopened to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as part of this Order and based on the results of the RPA.

c. This Order may be reopened and modified, to incorporate in accordance with the provisions set forth in 40 C.F.R., parts 122 and 124, to include requirements for the implementation of the watershed management approach or to include new ML's.

d. This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments, such as an update of an objective or the adoption of a TMDL for King Harbor.

e. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. **Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan.** The Discharger shall submit to the Regional Water Board an Initial Investigation TRE workplan (1-2 pages) within 90 days of the effective date of this permit. This plan shall describe the steps the Discharger intends to follow in the event that toxicity is detected. See section V of the Monitoring and Reporting Program (Attachment E) for an overview of TRE requirements.

Los Angeles County Department of Public Health, Recreation Monitoring Program – Monitoring Data On Monday of each week after the Lagoon opens, the Discharger is requested to submit tothe Regional Water Board, a copy of the daily log submitted to the Los Angeles County Department of Public Health, Recreation Water Program.

REVISED TENTATIVE

3. Storm Water Pollution Prevention Plan, Best Management Practices, and Spill Contingency Plan

a. The Discharger shall submit, within 90 days of the effective date of this Order:

i. An updated storm water pollution prevention plan (SWPPP) that describes site-specific management practices for minimizing contamination of storm water runoff and for preventing contaminated storm water runoff from being discharged directly to waters of the State. The updated SWPPP shall accurately reflect current facility conditions and incorporate changes in discharge practices. The BMPs shall address the following specific areas of concern: Lagoon, rest rooms, snack area, and trash handling. The SWPPP shall be developed in accordance with the requirements in Attachment G. All Best Management Practices (BMPs) used in the facility will be captured in the SWPPP and Spill Control Plan (SCP)

ii. SCP that shall be site-specific and shall cover all areas of the Facility. Each plan shall cover all areas of the Facility and shall include an updated drainage map for the Facility. The Discharger shall identify on a map of appropriate scale the areas that contribute runoff to the permitted discharge points; describe the activities in each area and the potential for contamination of storm water runoff and the discharge of hazardous waste/material.

The Discharger shall implement the SWPPP, and SCP within 10 days of the approval by the Executive Officer or 90 days after submittal of the plan if no comments are submitted by the Regional Board. The plans shall be reviewed annually and at the same time. Updated information shall be submitted within 30 days of revision.

4. Construction, Operation and Maintenance Specifications

The Discharger shall at all times properly operate and maintain all facilities and systems installed or used to achieve compliance with this order.

5. Other Special Provisions

Not applicable

6. Compliance Schedules

Not applicable

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below:

A. Single Constituent Effluent Limitation

If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (see Reporting Requirement I.G. of the MRP), then the Discharger is out of compliance.

B. Effluent Limitations Expressed as a Sum of Several Constituents

REVISED TENTATIVE

If the sum of the individual pollutant concentrations is greater than the effluent limitation, then the Discharger is out of compliance. In calculating the sum of the concentrations of a group of pollutants, consider constituents reported as ND or DNQ to have concentrations equal to zero, provided that the applicable ML is used.

C. Effluent Limitations Expressed as a Median

In determining compliance with a median limitation, the analytical results in a set of data will be arranged in order of magnitude (either increasing or decreasing order); and

1. If the number of measurements (n) is odd, then the median will be calculated as = $X_{(n+1)/2}$, or
2. If the number of measurements (n) is even, then the median will be calculated as= [$X_{n/2}$ + $X_{(n/2)+1}$], i.e. the midpoint between the n/2 and n/2+1 data points.

D. Multiple Sample Data

When determining compliance with an AMEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

E. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection 2 above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation; though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. For anyone calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

If the Discharger has a discharge event in May during the operating season (Memorial Day through Labor Day) and no off-season discharge events occur in May, the monitoring results may be included in the monthly average calculations for June. Similarly, if the Discharger has a discharge event in September during the operating season and no off-season discharge events occur in September, the results may be included in the monthly average calculations for August.

F. In determining compliance with the AMEL, the following provisions shall also apply to all constituents:

1. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for that constituent, the Discharger has demonstrated compliance with the AMEL for that month;

REVISED TENTATIVE

2. If the analytical result of a single sample monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any constituent, the Discharger shall collect four additional samples at approximately equal intervals during the month. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later.

   When all sample results are greater than or equal to the reported Minimum Level (see Reporting Requirement I.G. of the MRP), the numerical average of the analytical results of these five samples will be used for compliance determination.

   When one or more sample results are reported as "Not-Detected (ND)" or "Detected, but Not Quantified (DNQ)" (see Reporting Requirement I.G. of the MRP), the median value of these four samples shall be used for compliance determination. If one or both of the middle values is ND or DNQ, the median shall be the lower of the two middle values.

3. In the event of noncompliance with an AMEL, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the AMEL has been demonstrated.

4. If only one sample was obtained for the month or more than a monthly period and the result exceeds the AMEL; then the Discharger is in violation of the AMEL.

G. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

H. Instantaneous Minimum Effluent Limitation

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

I. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation.

J. Median Monthly Effluent Limitation (MMEL)

If the median of daily discharges over a calendar month exceeds the MMEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of noncompliance in a 31-day month). However, an alleged violation of the MMEL will be considered one violation for the purpose of assessing State mandatory minimum penalties. If no sample (daily discharge) is taken over a calendar month, no compliance determination can be made for that month with respect to effluent violation determination, but compliance determination can be made for that month with respect to reporting violation determination.

REVISED TENTATIVE

K. Chronic Toxicity

The chronic toxicity using the USEPA effluent toxicity tests shall be run using a multi-concentration test design only when required by EPA's short-term methods for estimating the chronic toxicity of effluents promulgated under 40 CFR 136. All NPDES effluent compliance monitoring for chronic toxicity shall be reported using the 100% effluent concentration and negative control, expressed in units of USEPA's TST statistical approach (pass or fail, % effect). The TST hypothesis (Ho) is statistically analyzed using only the permit-specified in-stream waste concentration and a negative control. The appropriate interpretation of measurement results from the TST (pass or fail) is, by design, independent from the concentration-response patterns of toxicity tests conducted using multi-concentration test designs. Therefore, when using the TST, application of concentration-response pattern review is not used because it does not improve the appropriate interpretation of the definitive TST result, as long as all Test Acceptability Criteria and other test review procedures (those related to Quality Assurance for effluent and receiving water toxicity tests, reference toxicant tests, and control performance described by the WET test methods manuals and TST guidance) are followed.

L. Mass and Concentration Limitations

Compliance with mass effluent limitations and concentration effluent limitations for the same parameter shall be determined separately. When the concentration for a parameter in a sample is reported as ND or DNQ, the corresponding mass emission rate determined using that sample concentration shall also be reported as ND or DNQ.

M. Bacterial Standards and Analyses

The geometric mean used for determining compliance with bacterial standards is calculated using the following equation:

$$\text{Geometric Mean} = (C_1 \times C_2 \times \ldots \times C_n)^{1/n}$$

where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 ml or CFU/100 ml) found on each day of sampling. For bacterial analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 ml for total and fecal coliform, at a minimum, and 1 to 1000 per 100 ml for *Enterococcus*). The detection method used for each analysis shall be reported with the results of the analysis.

Detection methods used for coliforms (total and fecal) and *Enterococcus* shall be those presented in Table 1A of part 136 (revised July 1, 2009), unless alternate methods have been approved by USEPA pursuant to part 136 or improved methods have been determined by the Executive Officer and/or USEPA.

REVISED TENTATIVE

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)
Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)
The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative
Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic
Pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)
CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge
Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)
DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

REVISED TENTATIVE

Dilution Credit
Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA)
ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays
Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries
Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters
All surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation
The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation
The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of

REVISED TENTATIVE

measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median
The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the n/2 and n/2+1).

Method Detection Limit (MDL)
MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 C.F.R. part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML)
ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone
Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

Persistent Pollutants
Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention
Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Resources Control Board (State Water Board) or Regional Water Board.

REVISED TENTATIVE

Reporting Level (RL)
The RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the ML's included in this Order, including an additional factor if applicable as discussed herein. The ML's included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

Standard Deviation (σ)
Standard Deviation is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

REVISED TENTATIVE

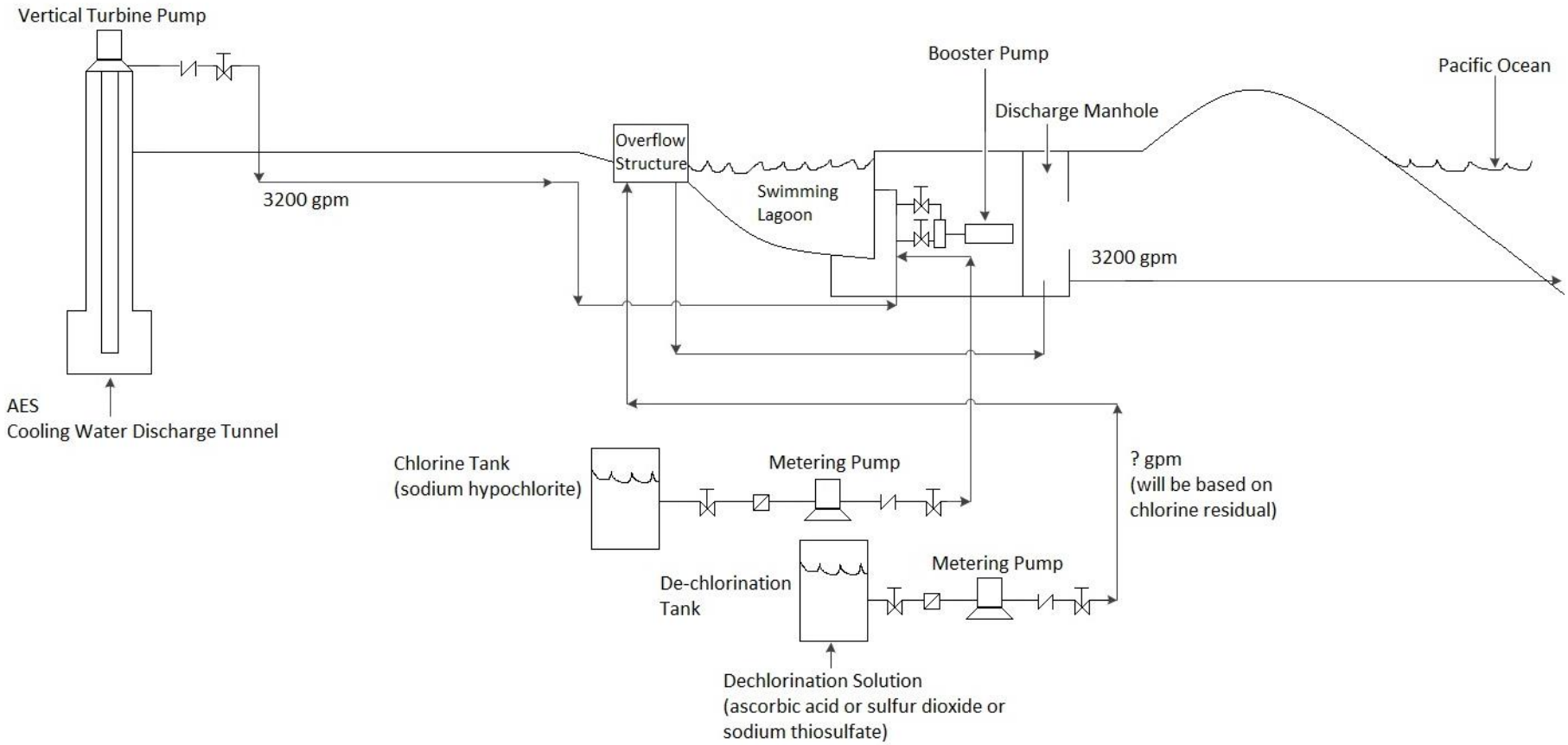
ATTACHMENT B – MAP

Site Map, City of Redondo Beach, Seaside Lagoon, CA0064297

REVISED TENTATIVE

ATTACHMENT C – FLOW SCHEMATIC

Pumping System Schematic Diagram



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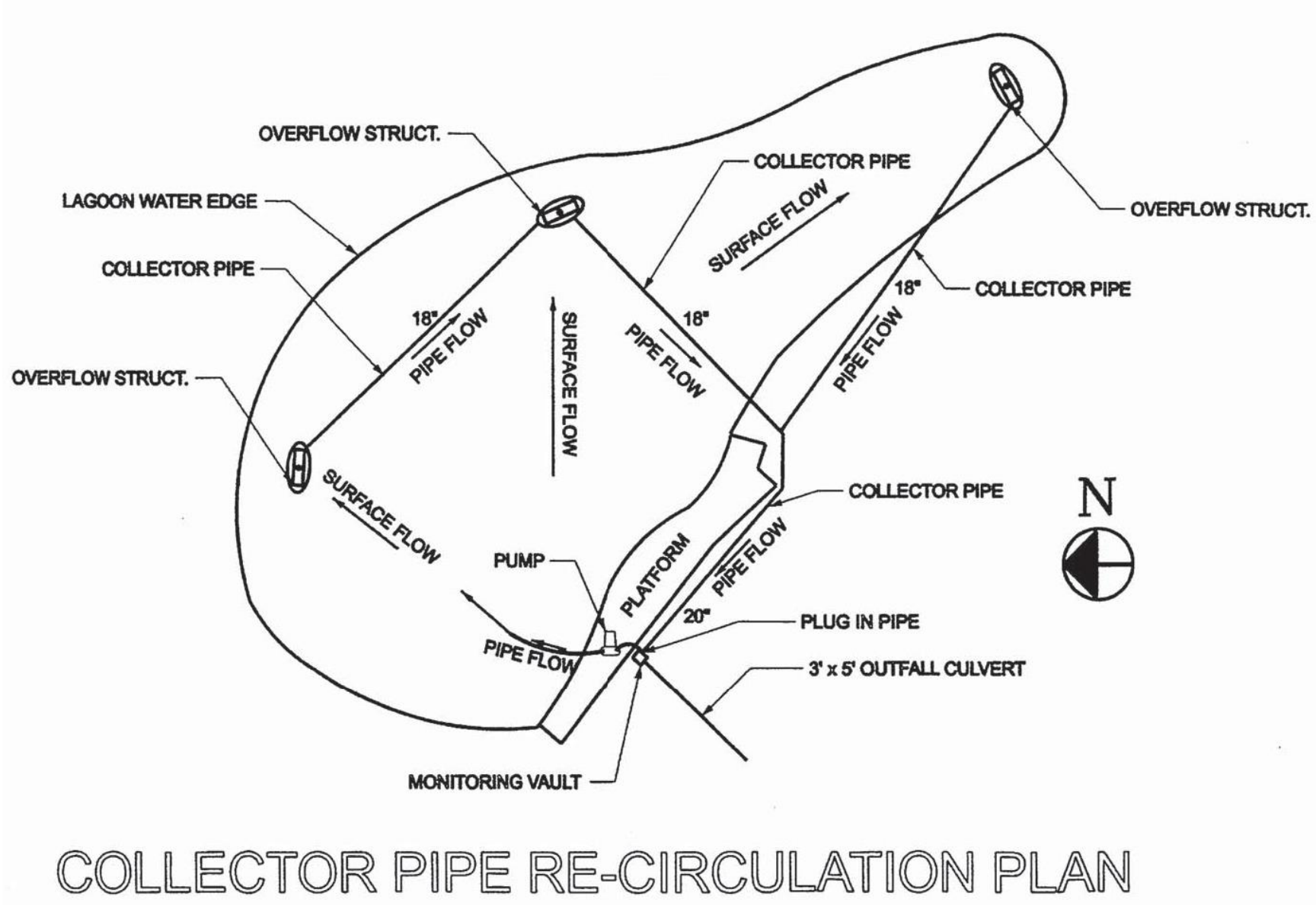
Site Schematic



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

REVISED TENTATIVE

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 13267, 13383);

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

G. Bypass

1. Definitions

   a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)

   b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and

   c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)

4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

REVISED TENTATIVE

5. Notice

   a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. As of December 21, 2020 all notices must be submitted electronically by the Discharger to the initial recipient, as defined in 40 C.F.R. section 127.2(b), in compliance with this section and 40 C.F.R. part 3 (including, in all cases, subpart D of part 3), section 122.22, and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by a particular permit or if required to do so by state law. (40 C.F.R. § 122.41(m)(3)(i).)

   b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). As of December 21, 2020 all notices must be submitted electronically by the Discharger to the initial recipient, as defined in 40 C.F.R. section 127.2(b), in compliance with this section and 40 C.F.R. part 3 (including, in all cases, subpart D of part 3), section 122.22, and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by a particular permit or if required to do so by state law. (40 C.F.R. § 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):

   a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));

   b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));

   c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and

   d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)

REVISED TENTATIVE

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. §§ 122.41(l)(3), 122.61.)

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)

B. Monitoring must be conducted according to test procedures approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. subchapters N or O. . Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or as required under 40 C.F.R. chapter 1, subchapter N or O. For the purposes of this paragraph, a method is sufficiently sensitive when:

1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
2. The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter 1, subchapter N or O for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. chapter 1, subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 C.F.R. §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 C.F.R. part 503), the Discharger shall retain records of all

REVISED TENTATIVE

monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and
2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Regional Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, §§ 13267, 13383.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA). (40 C.F.R. § 122.22(a)(3).).
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));

REVISED TENTATIVE

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. § 122.22(d).)

6. If documents described in Standard Provisions – V.B.1, V.B.2, or V.B.3 are submitted electronically by or on behalf of the NPDES-regulated facility, any person providing the electronic signature for such documents shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all of the relevant requirements of 40 C.F.R. part 3 (including, in all cases, subpart D of part 3) (Cross-Media Electronic Reporting) and 40 C.F.R. part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R § 122.22(e).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. As of December 21, 2016 all reports and forms must be submitted electronically by the Discharger to the initial recipient, as defined in Standard Provisions – Reporting V.J, in compliance with this section and 40 C.F.R. part 3 (including, in all cases, subpart D of part 3), section 122.22, and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by the permit or if required to do so by state law. (40 C.F.R. § 122.41(l)(4)(i).)

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the noncompliance was related to wet weather. As of December 21, 2020 all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted electronically by the Discharger to the initial recipient, as defined in Standard Provisions – Reporting V.J, in compliance with this section and 40 C.F.R. part 3 (including in all cases, subpart D of part 3), section 122.22, and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(6)(i).)

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or

REVISED TENTATIVE

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)

   The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 C.F.R. § 122.41(l)(1)(ii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 C.F.R. part 127. As of December 21, 2020 all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted electronically by the Discharger to the initial recipient, as defined in Standard Provisions – Reporting V.J, in compliance with this section and 40 C.F.R. part 3 (including, in all cases, subpart D of part 3), section122.22, and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board**,** State Water Board, or U.S. EPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

J. Identification of the Initial Recipient for NPDES Electronic Reporting Data

The owner, operator, or the duly authorized representative of an NPDES-regulated entity is required to electronically submit the required NPDES information (as specified in appendix A to 40 C.F.R. part 127) to the appropriate initial recipient, as determined by U.S. EPA, and as defined in 40 C.F.R. section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 C.F.R. § 122.41(l)(9).)

REVISED TENTATIVE

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):

   a. 100 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(1)(i));

   b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));

   c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or

   d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels" (40 C.F.R. § 122.42(a)(2)):

   a. 500 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(2)(i));

   b. 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));

   c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or

   d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

REVISED TENTATIVE

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP NO.8034)

CONTENTS

TABLES

REVISED TENTATIVE

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP NO. 8034)

Section 308 of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(*l*), 122.44(i), and 122.48 of title 40 of the Code of Federal Regulations (40 C.F.R.) require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

I. GENERAL MONITORING PROVISIONS

A. An effluent sampling station shall be established for Discharge Point 001 and shall be located where representative samples of that effluent can be obtained.

B. Effluent samples shall be taken prior to mixing with the receiving waters.

C. The Regional Water Board shall be notified in writing of any change in the sampling stations once established or in the methods for determining the quantities of pollutants in the individual waste streams.

D. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. sections 136.3, 136.4, and 136.5 (revised May 18, 2012); or, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

Laboratories analyzing effluent samples and receiving water samples shall be certified by the State Water Board, Drinking Water Division, Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer and must include quality assurance/quality control (QA/QC) data in their reports. A copy of the laboratory certification shall be provided each time a new certification and/or renewal of the certification is obtained from ELAP.

E. For any analyses performed for which no procedure is specified in the U.S. EPA guidelines or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.

F. Each monitoring report must affirm in writing that "all analyses were conducted at a laboratory certified for such analyses by the State Water Board or approved by the Executive Officer and in accordance with current U.S. EPA guideline procedures or as specified in this MRP".

G. The monitoring reports shall specify the analytical method used, the Method Detection Limit (MDL), and the Minimum Level (ML) for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported by one of the following methods, as appropriate:

1. An actual numerical value for sample results greater than or equal to the ML; or
2. "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML; or,
3. "Not-Detected (ND)" for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used.

Analytical data reported as "less than" for the purpose of reporting compliance with permit limitations shall be the same or lower than the permit limit(s) established for the given parameter.

REVISED TENTATIVE

Current ML's (Attachment G) are those published by the State Water Board in the *Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, February 24, 2005.

H. The MLs employed for effluent analyses shall be lower than the permit limitations established for a given parameter as per 40 CFR Parts 122 and 136, "National Pollutant Discharge Elimination System (NPDES): Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting". If the ML value is not below the effluent limitation, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test and associated laboratory QA/QC procedures.

I. The MLs employed for effluent analyses not associated with determining compliance with effluent limitations in this Order shall be lower than the lowest applicable water quality objective, for a given parameter, as stated in the CTR or Basin Plan. If the ML value is not below the water quality objective, then the lowest ML value and its associated analytical method shall be selected for compliance purposes, as per 40 CFR Parts 122 and 136. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test, the associated laboratory QA/QC procedures, reporting levels (RLs), and method detection limits (MDLs).

The Regional Water Board, in consultation with the State Water Board Quality Assurance Program, shall establish a ML that is not contained in Attachment G to be included in the Discharger's permit in any of the following situations:

1. When the pollutant under consideration is not included in Attachment G;
2. When the Discharger and Regional Water Board agree to include in the permit a test method that is more sensitive than that specified in part 136 (revised May 18, 2012);
3. When the Discharger agrees to use an ML that is lower than that listed in Attachment G;
4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment G, and proposes an appropriate ML for their matrix; or,
5. When the Discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the U.S. EPA-approved method 1613 for dioxins and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, the Regional Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

J. Water/wastewater samples must be analyzed within allowable holding time limits as specified in section 136.3. All QA/QC items must be run on the same dates the samples were actually analyzed, and the results shall be reported in the Regional Water Board format, when it becomes available, and submitted with the laboratory reports. Proper chain of custody procedures must be followed, and a copy of the chain of custody shall be submitted with the report.

K. All analyses shall be accompanied by the chain of custody, including but not limited to data and time of sampling, sample identification, and name of person who performed sampling, date of analysis, name of person who performed analysis, QA/QC data, method detection

REVISED TENTATIVE

limits, analytical methods, copy of laboratory certification, and a perjury statement executed by the person responsible for the laboratory.

L. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to insure accuracy of measurements, or shall insure that both equipment activities will be conducted.

M. Field analyses with short sample holding times such as pH, total residual chlorine, and temperature, may be performed using properly calibrated and maintained portable instruments by trained personnel acting on the Discharger's behalf, using methods in accordance with 40 C.F.R. part 136. All field instruments must be calibrated per manufacturer's instructions. A manual containing the standard operating procedures for all field analyses, including records of personnel proficiency training, instruments calibration and maintenance, and quality control procedures shall be maintained onsite, and shall be available for inspection by Regional Water Board staff. Information including instrument calibration, time of sample collection, time of analysis, name of analyst, quality assurance/quality control data, and measurement values shall be clearly documented during each field analysis and submitted to the Regional Water Board as part of the corresponding regular monitoring report.

N. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Unless otherwise specified in the analytical method, duplicate samples must be analyzed at a frequency of 5 percent (1 in 20 samples) with at least one if there are fewer than 20 samples in a batch. A batch is defined as a single analytical run encompassing no more than 24 hours from start to finish. A similar frequency shall be maintained for analyzing spiked samples.

O. When requested by the Regional Water Board or U.S. EPA, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger must have a success rate equal to or greater than 80 percent.

P. For parameters that both average monthly and daily maximum limits are specified and the monitoring frequency is less than four times a month, the following shall apply. If an analytical result is greater than the average monthly limit, the Discharger shall collect four additional samples at approximately equal intervals during the month, until compliance with the average monthly limit has been demonstrated. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later. In the event of noncompliance with an average monthly effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the average monthly effluent limitation has been demonstrated. The Discharger shall provide for the approval of the Executive Officer a program to ensure future compliance with the average monthly limit.

Q. In the event wastes are transported to a different disposal site during the reporting period, the following shall be reported in the monitoring report:

1. Types of wastes and quantity of each type;
2. Name and address for each hauler of wastes (or method of transport if other than by hauling); and
3. Location of the final point(s) of disposal for each type of waste.

If no wastes are transported off-site during the reporting period, a statement to that effect shall be submitted.

REVISED TENTATIVE

R. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring location to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Shall be located at the entrance of the intake water to the Lagoon.
--		
001	EFF-001	(Latitude 33.8441º N, Longitude -118.3946º W)
--	RSW-001	At a location within 50 feet from the discharge point, outside the influence of the discharge, in King Harbor

III. INFLUENT MONITORING REQUIREMENTS

Table E-2. Influent Monitoring – Regular Season (Memorial Day to Labor Day)

Parameter	Units	Sample Type	Minimum Sampling Frequency [1]	Required Analytical Test Method
Total Suspended Solids (TSS)	mg/l	Grab	1/Week	[2]
Antimony, Total Recoverable	µg/L	Grab	1/Month	[2]
Arsenic, Total Recoverable	µg/L	Grab	1/Month	[2]
Cadmium, Total Recoverable	µg/L	Grab	1/Month	[2]
Copper, Total Recoverable	µg/L	Grab	1/Month	[2]
Mercury, Total Recoverable	µg/L	Grab	1/Month	[2]
Nickel, Total Recoverable	µg/L	Grab	1/Month	[2]
Selenium, Total Recoverable	µg/L	Grab	1/Month	[2]
Silver, Total Recoverable	µg/L	Grab	1/Month	[2]
Thallium, Total Recoverable	µg/L	Grab	1/Month	[2]
Zinc, Total Recoverable	µg/L	Grab	1/Month	[2]
Cyanide, Total (as CN)	µg/L	Grab	1/Month	[2]

1. Two influent samples shall be collected at the specified frequency and should be representative of the intake water for the period sampled. The first influent sample shall be collected two hours prior to the effluent sample. The second influent sample shall be collected at approximately the same time as the effluent sample.
2. Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants. The methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, provided here as Attachment H.

REVISED TENTATIVE

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor final wastewater discharges from Discharge Point 001 at Monitoring Location EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding minimum level. Sampling must be conducted when there is a discharge, and must be collected during low tide conditions.

Table E-3. Effluent Monitoring – Regular Season (Memorial Day to Labor Day)

Parameter	Units	Sample Type	Minimum Sampling Frequency [8]	Required Analytical Test Method
Total Flow[1]	MGD	Meter	1/Day	[2]
pH	standard units	Grab	1/Month	[2]
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L, lbs/day[3]	Grab	1/Month	[2]
Total Suspended Solids (TSS)	mg/L, lbs/day[3]	Grab	1/Week	[2]
Oil and Grease	mg/L, lbs/day[3]	Grab	1/Week	[2]
Enterococcus	MPN/100 ml	Grab	~~3~~2/Week [9]	[2, 4]
Fecal Coliform	MPN/100 ml	Grab	~~3~~2/Week[9]	[2, 4]
Total Coliform	MPN/100 ml	Grab	~~3~~2/Week [9]	[2, 4]
Ammonia Nitrogen, Total (as N)	mg/L, lbs/day[3]	Grab	1/Month	[2]
Chronic Toxicity	Pass or Fail and % Effect (TST)	Grab	1/Year	[5]
Chlorine, Total Residual	µg/L, lbs/day[3]	Grab	~~3~~2/Week	[2]
Temperature	º F	Grab	1/Month	[2]
Turbidity	NTU	Grab	1/Month	[2]
Arsenic, Total Recoverable	µg/L, lbs/day[3]	Grab	1/Month	[2]
Cadmium, Total Recoverable	µg/L, lbs/day[3]	Grab	1/Month	[2]
Copper, Total Recoverable	µg/L, lbs/day[3]	Grab	1/Month	[2]
Mercury, Total Recoverable	µg/L, lbs/day[3]	Grab	1/Month	[2]
Nickel, Total Recoverable	µg/L, lbs/day[3]	Grab	1/Month	[2]

REVISED TENTATIVE

Parameter	Units	Sample Type	Minimum Sampling Frequency [8]	Required Analytical Test Method
Selenium, Total Recoverable	µg/L, lbs/day[3]	Grab	1/Month	[2]
Silver, Total Recoverable	µg/L, lbs/day[3]	Grab	1/Month	[3]
Thallium, Total Recoverable	µg/L, lbs/day[3]	Grab	1/Month	[3]
Zinc, Total Recoverable	µg/L, lbs/day[3]	Grab	1/Month	[3]
Cyanide, Total (as CN)	µg/L, lbs/day[3]	Grab	1/Month	[3]
TCDD Equivalents[6]	µg/L, lbs/day[3]	Grab	1/Permit Term	[3]
Remaining Priority Pollutants[7]	µg/L, lbs/day[3]	Grab	1/Year	[3]

1 The Discharger shall measure flow using the flow meter. The Discharger shall report the total daily flow in million gallons per day (MGD) for each day a discharge occurs. Periods of no flow shall also be reported.

2 Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136; for priority pollutants, the methods must meet the lowest ML's specified in Attachment 4 of the SIP, provided in Attachment H. Where no methods are specified for a given pollutant, the methods must be approved by the Regional Water Board or the State Water Board. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding ML necessary to demonstrate compliance with applicable effluent limitations.

3 The mass emission (lbs/day) for the discharge shall be calculated and reported using the limitation concentration and the actual flow rate measured at the time of discharge, using the formula:

$M = 8.34 \times Ce \times Q$

where: M = mass discharge for a pollutant, lbs/day
Ce = Reported concentration for a pollutant in mg/L
Q = actual discharge flow rate, MGD.

4 Detection methods used for coliforms (total and fecal) and *Enterococcus* shall be those presented in Table 1A of 40 C.F.R. part 136, unless alternate methods have been approved by U.S. EPA pursuant to 40 C.F.R. part 136 or improved methods have been determined by the Executive Officer and/or U.S. EPA.

5 The Discharger shall conduct Whole Effluent Toxicity monitoring as outlined in section V. Refer to section V.A.7 of this MRP for the accelerated monitoring schedule. The median monthly summary result shall be reported as "Pass" or "Fail". The maximum daily single result shall be reported as "Pass or Fail" and "% Effect". When there is discharge more than 1 day in a calendar month period, up to three independent toxicity tests are required when one toxicity test results in "Fail".

6 TCDD equivalents shall be calculated using the following formula, where the ML's and the toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the ML's to zero. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners.

Dioxin-TEQ (TCDD equivalents) = $\Sigma(C_x \times TEF_x)$

where: C_x = concentration of dioxin or furan congener x
TEF_x= TEF for congener x

Toxicity Equivalency Factors

Congeners	Minimum Levels (pg/L)	Toxicity Equivalence Factor (TEF)
2,3,7,8 - tetra CDD	10	1.0
1,2,3,7,8 - penta CDD	50	1.0

REVISED TENTATIVE

Congeners	Minimum Levels (pg/L)	Toxicity Equivalence Factor (TEF)
1,2,3,4,7,8 - hexa CDD	50	0.1
1,2,3,6,7,8 - hexa CDD	50	0.1
1,2,3,7,8,9 - hexa CDD	50	0.1
1,2,3,4,6,7,8 - hepta CDD	50	0.01
Octa CDD	100	0.0001
2,3,7,8 - tetra CDF	10	0.1
1,2,3,7,8 - penta CDF	50	0.05
2,3,4,7,8 - penta CDF	50	0.5
1,2,3,4,7,8 - hexa CDF	50	0.1
1,2,3,6,7,8 - hexa CDF	50	0.1
1,2,3,7,8,9 - hexa CDF	50	0.1
2,3,4,6,7,8 - hexa CDF	50	0.1
1,2,3,4,6,7,8 - hepta CDFs	50	0.01
1,2,3,4,7,8,9 - hepta CDFs	50	0.01
Octa CDF	100	0.0001

[7] Priority pollutants as defined by California Toxics Rule (CTR) and included as Attachment I.

[8] Two influent samples shall be collected at the specified frequency and should be representative of the intake water for the period sampled. The first influent sample shall be collected two hours prior to the effluent sample. The second influent sample shall be collected at approximately the same time as the effluent sample.

9. Monitoring shall be conducted three ~~two~~ times per week for a month. If all samples are in compliance with the limitations; the monitoring frequency may be reduced to weekly. If an exceedance occurs the frequency goes back to three~~two~~ times per week until the facility is in compliance for a month.

Table E-4. Effluent Monitoring – Off-Season (Following Labor Day and Prior to Memorial Day)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Flow[1]	MGD	Meter	1/Day during discharge	[3]
pH	standard units	Grab	1/Discharge[2]	[3]
BOD	mg/L, lbs/day[4]	Grab	1/Discharge[2]	[3]
TSS	mg/L, lbs/day[4]	Grab	1/Discharge[2]	[3]
Oil and Grease	mg/L, lbs/day[4]	Grab	1/Discharge[2]	[3]
Enterococcus	MPN/100 ml	Grab	1/Discharge[2]	[3]
Fecal Coliform	MPN/100 ml	Grab	1/Discharge[2]	[3]
Total Coliform	MPN/100 ml	Grab	1/Discharge[2]	[3]
Ammonia Nitrogen Total (as N)	mg/L, lbs/day[4]	Grab	1/Discharge[2]	[3]
Chlorine, Total Residual	µg/L, lbs/day[4]	Grab	1/Discharge[2]	[3]

REVISED TENTATIVE

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Temperature	º F	Grab	1/Discharge[2]	[3]
Turbidity	NTU	Grab	1/Discharge[2]	[3]
Arsenic, Total Recoverable	µg/L, lbs/day[4]	Grab	1/Discharge[2]	[3]
Cadmium, total Recoverable	µg/L, lbs/day[4]	Grab	1/Discharge[2]	[3]
Copper, Total Recoverable	µg/L, lbs/day[4]	Grab	1/Discharge[2]	[3]
Mercury, Total Recoverable	µg/L, lbs/day[4]	Grab	1/Discharge[2]	[3]
Nickel, Total Recoverable	µg/L, lbs/day	Grab	1/Discharge[2]	[3]
Selenium, Total Recoverable	µg/L, lbs/day[4]	Grab	1/Discharge[2]	[3]
Silver, Total Recoverable	µg/L, lbs/day[4]	Grab	1/Discharge[2]	[3]
Thallium, Total Recoverable	µg/L, lbs/day[4]	Grab	1/Discharge[2]	[3]
Zinc, Total Recoverable	µg/L, lbs/day[4]	Grab	1/Discharge[2]	[3]
Cyanide, Total (as CN)	µg/L, lbs/day[4]	Grab	1/Discharge[2]	[3]

[1] The Discharger shall measure flow using the flow meter. The Discharger shall report the total daily flow (MGD) for each day a discharge occurs.

[2] During periods of extended discharge of one week or more, no more than one sample per week is required.

[3] Pollutants shall be analyzed using the analytical methods described in 40 C.F.R part 136; for priority pollutants. The methods must meet the lowest minimum levels (ML's) specified in Attachment 4 of the SIP, provided as Attachment H. Where no methods are specified for a given pollutant, the methods must be approved by this Regional Water Board or the State Water Board.

[4] The mass emission (lbs/day) for the discharge shall be calculated and reported using the limitation concentration and the actual flow rate measured at the time of discharge, using the formula:

M = 8.34 x Ce x Q

where: M = mass discharge for a pollutant, lbs/day
Ce = Reported concentration for a pollutant in mg/L
Q = actual discharge flow rate, MGD.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Chronic Toxicity Testing

1. Definition of Chronic Toxicity Testing

Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms. Chronic toxicity test results shall be measured using the two concentration (i.e., discharge in-stream waste concentration and laboratory water

REVISED TENTATIVE

control) Test of Significant Toxicity (TST) statistical approach and reported in units of Pass or Fail and % Effect.

2. Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity

The chronic toxicity IWC for this discharge at Discharge Point 001 is 100 percent effluent. For receiving water monitoring, the IWC shall be 100 percent of the sample collected at the specified station location for receiving water monitoring.

3. Sample Volume and Holding Time

The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test and Toxicity Identification Evaluation (TIE) studies. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.

4. Chronic Marine and Estuarine Species and Test Methods

If effluent samples are collected from outfalls discharging to receiving waters with salinity ≥1 ppt, the Discharger shall conduct the following chronic toxicity tests on effluent samples—at the in-stream waste concentration for the discharge—in accordance with species and test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). Artificial sea salts shall be used to increase sample salinity. In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

a. A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01).

b. A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, and the sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0), or a static non-renewal toxicity test with the red abalone, *Haliotis rufescens* (Larval Shell Development Test Method).

c. A static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0).

5. Species Sensitivity Screening

Species sensitivity screening shall be conducted monthly for a period of 3 months. Once each month, the Discharger shall collect a single effluent sample and concurrently conduct three toxicity tests, using the fish, an invertebrate, and the alga species previously referenced. This sample shall also be analyzed for the parameters required for the discharge during that given month. The species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit cycle.

Rescreening is required at least once per 5 years. The Discharger shall rescreen with the 3 species listed above and continue to monitor with the most sensitive species. If the first suite of rescreening tests demonstrates that the same species is the most sensitive, then the rescreening does not need to include more than one suit of tests. If a different species is the most sensitive, or if there is ambiguity, then the Discharger shall proceed with suites of screening tests using enough collected effluent for a minimum of three, but not to exceed five suites.

REVISED TENTATIVE

6. Quality Assurance and Additional Requirements

Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below.

a. The discharge is subject to determination of "Pass" or "Fail" and "Percent Effect" from a single-effluent concentration chronic toxicity test at the discharge IWC using the Test of Significant Toxicity (TST) approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis (Ho) for the TST approach is: Mean discharge IWC response ≤0.75 × Mean control response. A test result that rejects this null hypothesis is reported as "Pass". A test result that does not reject this null hypothesis is reported as "Fail". The relative "Percent Effect" at the discharge IWC is defined and reported as: ((Mean control response ÷ Mean discharge IWC response) ÷ Mean control response)) × 100.

b. The Median Monthly Effluent Limit (MMEL) for chronic toxicity only applies when there is a discharge more than one day in a calendar month period. During such calendar months, exactly three independent toxicity tests are required when one toxicity test results in "Fail".

c. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test methods, then the Permittee must re-sample and re-test within 14 days.

d. Dilution water and control water, including brine controls, shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.

e. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.). Monthly reference toxicant testing is sufficient.

f. All reference toxicant test results should be reviewed and reported according to EPA guidance on the evaluation of concentration-response relationships found in *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (40 C.F.R. part 136) (EPA 821-B-00-004, 2000).

g. The Discharger shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the Monitoring and Reporting Program and the rationale is explained in the Fact Sheet (Attachment F).

7. Preparation of Initial Investigation TRE Work Plan

The Discharger shall prepare or update and submit a generic Initial Investigation TRE Work Plan within 90 days of the permit effective date, to be ready to respond to toxicity events. The Discharger shall review and update this work plan as necessary so it remains current and applicable to the discharge. At minimum, the work plan shall include:

a. A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

REVISED TENTATIVE

b. A description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the facility.

c. If a Toxicity Identification Evaluation (TIE) is necessary, an indication of who would conduct the TIEs (i.e., an in-house expert or outside contractor).

8. Accelerated Monitoring Schedule for Median Monthly Summary Result: "Fail" (or Maximum Daily Single Result: "Fail and % Effect ≥50")

The summary result shall be used when there is discharge more than one day in a calendar month. The single result shall be used when there is discharge of only one day in a calendar month.

Within 24 hours of the time the Discharger becomes aware of this result, the Discharger shall implement an accelerated monitoring schedule consisting of four, five-concentration toxicity tests (including the discharge IWC), conducted at approximately 2 week intervals, over an eight week period. If each of the accelerated toxicity tests results in "Pass", the Discharger shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results in "Fail", the Discharger shall immediately implement the Toxicity Reduction Evaluation (TRE) Process conditions set forth below.

9. Toxicity Reduction Evaluation (TRE) Process

a. **Preparation and Implementation of Detailed TRE Work Plan.** The Discharger shall immediately initiate a TRE using, according to the type of treatment facility, EPA manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833/B-99/002, 1999) or *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, 1989). Within 30 days, the Discharger shall submit to the Executive Officer a Detailed TRE Work Plan, which shall follow the generic Initial Investigation TRE Work Plan revised as appropriate for this toxicity event. It shall include the following information, and comply with additional conditions set by the Executive Officer:

b. Further actions by the Discharger to investigate, identify, and correct the causes of toxicity.

c. Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.

d. A schedule for these actions, progress reports, and the final report.

10. TIE Implementation.

a. The Discharger may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test method and, as guidance, EPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.

REVISED TENTATIVE

b. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.

c. The Discharger shall conduct routine effluent monitoring for the duration of the TRE process. Additional accelerated monitoring and TRE work plans are not required once a TRE is begun.

d. The Regional Water Board recognizes that toxicity may be episodic and identification of causes and reduction of sources of toxicity may not be successful in all cases. The TRE may be ended at any stage if monitoring finds there is no longer toxicity.

11. Reporting

The Self Monitoring Report (SMR) shall include a full laboratory report for each toxicity test. This report shall be prepared using the format and content of the test methods manual chapter called Report Preparation, including:

a. The toxicity test results for the TST approach, reported as “Pass” or “Fail” and “Percent (%) Effect” at the chronic toxicity IWC for the discharge.

b. Water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).

c. TRE/TIE results. The Regional Water Board Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses.

d. Statistical program (e.g., TST calculator, CETIS, etc.) output results for each toxicity test.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

Not Applicable

VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Surface Water Monitoring (Monitoring Location RSW-001)

1. The Discharger shall monitor the receiving water at Monitoring Location RSW-001 as follows:

Table E-5. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency [5]	Required Analytical Test Method
pH	standard units	Grab	1/Quarter[1]	[2]
TSS	mg/L	Grab	1/Quarter	[2]
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Quarter[1]	[2]

REVISED TENTATIVE

Parameter	Units	Sample Type	Minimum Sampling Frequency [5]	Required Analytical Test Method
Chlorine, Total Residual	µg/L	Grab	1/Quarter	[2]
Dissolved Oxygen (DO)	mg/L	Grab	1/Year	
Salinity	g/L	Grab	1/Quarter[1]	[2]
Temperature	°F	Grab	1/Quarter[1]	[2]
Turbidity	NTU	Grab	1/Quarter	[2]
Arsenic, Total Recoverable	µg/L	Grab	1/Quarter	[2]
Cadmium, Total Recoverable	µg/L	Grab	1/Quarter	[2]
Copper, Total Recoverable	µg/L	Grab	1/Quarter	[2]
Mercury, Total Recoverable	µg/L	Grab	1/Quarter	[2]
Selenium, Total Recoverable	µg/L	Grab	1/Quarter	[2]
Silver, Total Recoverable	µg/L	Grab	1/Quarter	[2]
Zinc, Total Recoverable	µg/L	Grab	1/Quarter	[2]
TCDD – Equivalents[3]	µg/L	Grab	1/Permit Term	[2]
Cyanide, Total (as CN)	µg/L	Grab	1/Quarter	[2]
Remaining Priority Pollutants[4]	µg/L	Grab	1/Year	[2]
Fecal Coliform	MPN/100 ml	Grab	1/Quarter	[2]
Total Coliform	MPN/100 ml	Grab	1/Quarter	[2]
Enterococcus	MPN/100 ml	Grab	1/Quarter	[2]

1. Receiving water pH, temperature, salinity and ammonia must be collected at the same time the samples are collected for effluent ammonia analysis. A hand-held field meter may be used for pH and temperature, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.
2. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136; for priority pollutants, the methods must meet the lowest ML's specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level.
3. TCDD equivalents shall be calculated using the following formula, where the ML's and the toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the ML's to zero. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners.

   Dioxin-TEQ (TCDD equivalents) = $\Sigma(C_x \times TEF_x)$

   where: C_x = concentration of dioxin or furan congener x

   TEF_x= TEF for congener x

REVISED TENTATIVE

Toxicity Equivalency Factors

Congeners	Minimum Levels (pg/L)	Toxicity Equivalence Factor (TEF)
2,3,7,8 - tetra CDD	10	1.0
1,2,3,7,8 - penta CDD	50	1.0
1,2,3,4,7,8 - hexa CDD	50	0.1
1,2,3,6,7,8 - hexa CDD	50	0.1
1,2,3,7,8,9 - hexa CDD	50	0.1
1,2,3,4,6,7,8 - hepta CDD	50	0.01
Octa CDD	100	0.0001
2,3,7,8 - tetra CDF	10	0.1
1,2,3,7,8 - penta CDF	50	0.05
2,3,4,7,8 - penta CDF	50	0.5
1,2,3,4,7,8 - hexa CDF	50	0.1
1,2,3,6,7,8 - hexa CDF	50	0.1
1,2,3,7,8,9 - hexa CDF	50	0.1
2,3,4,6,7,8 - hexa CDF	50	0.1
1,2,3,4,6,7,8 - hepta CDFs	50	0.01
1,2,3,4,7,8,9 - hepta CDFs	50	0.01
Octa CDF	100	0.0001

4. Priority Pollutants as defined by the CTR and included as Attachment I.
5. The receiving water sample shall be collected at approximately the same time as the effluent sample

IX. OTHER MONITORING REQUIREMENTS

BMPP Status and Effectiveness Report

1. As required under special Provision VI.C.3 of this Order, the Discharger shall submit an updated Storm Water Pollution Prevention Plan (SWPPP) to the Executive Officer of the Regional Water Board within 90 days of the Effective date of this permit.

2. Annually the Discharger shall report the status of the implementation and the effectiveness of the SWPPP required under Special Provision VI.C.3 of this Order. The SWPPP shall be reviewed at a minimum once per year and updated as needed to ensure all actual or potential sources of pollutants in wastewater discharged from the facility are addressed in the SWPPP. All changes or revisions to the SWPPP will be summarized in the annual report required under Attachment E, Monitoring and Reporting, section X.D.

3. On every Monday, the Discharger is requested to submit to the Regional Water Board at LosAngeles@waterboards.ca.gov, referencing CI-8034, NPDES No. CA0064297, and Order No. R4-2017-XXXX, the data collected and submitted to the Los Angeles County Department of Public Health, Recreation Water Program.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

2. If there is no discharge during any reporting period, the report shall so state.

REVISED TENTATIVE

3. If the Discharger monitors (other than for process/operational control, startup, research, or equipment testing) any influent, effluent, or receiving water constituent more frequently than required by this Order using approved analytical methods, the results of those analyses shall be included in the monitoring report. These results shall be reflected in the calculation of the average (or median) used in demonstrating compliance with this Order/Permit.

4. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with waste discharge requirements, as well as all excursions of effluent limitations.

5. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.

6. The Discharger shall report the results of chronic toxicity testing, TRE and TIE as required in the Attachment E, Monitoring and Reporting, section V.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS Web site will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-6. Monitoring Periods and Reporting Schedule

Reporting Period	SMR Due Date
Start of Operation – June 30	August 1
July – July 31	September 1
August 1 - End of Operation	October 1
Annual Summary Report	March 1 of each year

Monitoring reports for off-season discharges shall be submitted 45 days after sampling. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

REVISED TENTATIVE

5. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

      For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

   c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

   d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

6. **Compliance Determination.** Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

7. **Multiple Sample Data.** When determining compliance with an AMEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

   a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

   b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

8. The Discharger shall submit SMRs in accordance with the following requirements:

   a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance

REVISED TENTATIVE

with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

C. Discharge Monitoring Reports (DMRs)

As of the effective date of this Order, if the Discharger operates a "minor" facility as designated on page 1 of this Order, submittal of Discharge Monitoring Reports (DMRs) is not required. However, at any time during the term of this Order, the State Water Board or the Regional Water Board may notify and require the Discharger to electronically submit DMRs.

D. Other Reports

1. The Discharger shall report the results of any toxicity testing, TRE/TIE, or SWPPP, required by Special Provisions in Sections VI.C.2.a and VI.C.3.a of the Order. The Discharger shall submit reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date.
2. **Within 90 days** of the effective date of this permit, the Discharger is required to submit the following to the Regional Water Board:
   a. Initial Investigation TRE workplan
   b. Updated SWPPP
3. If the Discharger wishes to participate in a coordinated receiving water, biomonitoring, and sediment monitoring program with other dischargers to the King Harbor, then the Discharger shall submit a report seeking approval of the Regional Water Board.

REVISED TENTATIVE

ATTACHMENT F – FACT SHEET

CONTENTS

REVISED TENTATIVE

TABLES

REVISED TENTATIVE

ATTACHMENT F – FACT SHEET

As described in section II.B of this Order, the Regional Water Board incorporates this Fact Sheet as findings of the Regional Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	4B190143001
Discharger	City of Redondo Beach
Name of Facility	Seaside Lagoon
Facility Address	200 Portofino Way Redondo Beach, CA 90277 Los Angeles County
Facility Contact, Title and Phone	Ted Semaan, Public Works Director (310) 318-0686 ext. 4172 (Ted.Semaan@redondo.org)
Authorized Person to Sign and Submit Reports	Ted Semaan, Public Works Director (310) 318-0686 ext. 4172
Mailing Address	Public Works Department, Engineering Services Division 414 Diamond Street Redondo Beach, CA 90277 Los Angeles County
Billing Address	Same as Mailing Address
Type of Facility	Swimming Lagoon
Major or Minor Facility	Minor
Threat to Water Quality	3
Complexity	C
Pretreatment Program	N
Recycling Requirements	N/A
Facility Permitted Flow	3.07million gallons per day (MGD)
Facility Design Flow	3.07MGD
Watershed	Santa Monica Bay Watershed Management Area
Receiving Water	King Harbor
Receiving Water Type	Enclosed Bay

A. The City of Redondo Beach (hereinafter Discharger) is the owner and operator of the Seaside Lagoon (hereinafter Facility), a city park used for recreational activities.

REVISED TENTATIVE

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. The Facility discharges wastewater to King Harbor, a water of the United States, and is currently regulated by Order R4-2010-0185 which was adopted on October 7, 2010, and expired on September 10, 2015.

C. The Discharger filed a report of waste discharge and submitted an application for reissuance of its WDRs and NPDES permit on March 12, 2015. 40 CFR Part 122.6, "Continuation of expiring permits", stipulates that the conditions of an expired permit continue in force until the effective date of the new permit, if the permittee has submitted a timely application. The Permittee has submitted a timely application. A site visit was conducted on April 20, 2015, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

II. FACILITY DESCRIPTION

The Seaside Lagoon Facility (Seaside Lagoon or Facility) is located at 200 Portofino Way, Redondo Beach, California, and is owned and operated by the City of Redondo Beach (hereinafter the Permittee or Discharger). The Facility is a city park that includes a 1.4 million gallon, man-made, saltwater swimming lagoon. Other features include artificial beaches, play areas, and a snack bar. Water for the Lagoon comes from the Redondo Beach Generating Station (RBGS or Power Plant) where the seawater collected from King Harbor is used to cool turbines. The Power Plant is located at 1100 Harbor Drive, Redondo Beach. RBGS currently operates four steam generating units (Units 5 – 8) in the city of Redondo Beach. The RBGS is owned and operated by AES Redondo Beach, LLC. Four other steam units (Units 1-4) have been retired but remain at the facility. The Power Plant is a "peak-demand" generation facility and as such operates intermittently. Cooling water for Units 5 and 6 is withdrawn through two submerged conduits extending into King Harbor and the Redondo Beach Marina, which is also located in King Harbor. Cooling water for Units 7 and 8 is withdrawn through a submerged conduit that extends approximately 3000 feet from the facility and is located at the mouth of King Harbor.

When operated at design capacity, the AES Power Plant discharges up to 898 MGD of once-through non-contact cooling water through two discharge outfalls (one discharges to Pacific Ocean and the second one discharges to King Harbor). The discharges are regulated under separate WDRs contained in Order No. R4-2016-0222. Approximately 3,200 gallons per minute (GPM) over a 16-hour operating day, which is equivalent to 3.07 MGD (approximately 0.26% of the total discharge from RBGS), of Power Plant once-through cooling water (that discharges to King Harbor) is directed to the Seaside Lagoon.

Seaside Lagoon is open to the public for swimming from Memorial Day through Labor Day. Discharges mainly occur during this period, however, the Discharger occasionally allows the use of the Facility for social functions outside of the normal operating period which would also result in discharges.

Seaside Lagoon is a manmade waterbody. The Lagoon is constructed of a rock revetment with underlying sand. A 140 x 30 foot concrete structure was constructed adjacent to the revetment to house the water distribution system and provide a platform for installing recreational equipment (slides) used to enter the Lagoon. The revetment and sand surfaces are pervious, and therefore a constant inflow of water is needed to maintain the designed water surface elevation. Some of the water entering the Lagoon infiltrates into the pervious bottom, it evaporates, and it may be splashed from the Lagoon as a result of recreational use. Water is continually entering and exiting the Lagoon during normal operations.

REVISED TENTATIVE

Source water for the Lagoon is obtained from the effluent discharge pipe from the RBGS. The pipeline is underground and runs approximately 1,000 feet from the RBGS to the Lagoon. The City of Redondo Beach maintains a pump station within a small building located on the property of the Redondo Beach Hotel.

The pump station consists of a valve that diverts a portion of the flow within the RBGS effluent pipe. The RBGS intermittently discharges to King Harbor. When RBGS discharge is not occurring, the Lagoon source water becomes standing water that is present in the RBGS discharge pipe and any water that back siphons from King Harbor. Thus, the King Harbor seawater serves as source water for the Lagoon influent and the receiving water for Lagoon effluent. During the operating season influent pumps run from approximately 8:30 am until 6:15 pm.

A. Description of Wastewater and Treatment

The water supply system is equipped with both chlorination and dechlorination facilities. The chlorination system consists of one 1,000-gallon storage tank which holds 17 percent sodium hypochlorite; dual chemical feed pumps with manual controls; and related piping. The dechlorination system consists of one 1,000-gallon storage tank which holds 38 percent bisulfite; dual chemical feed pumps with manual controls; and related piping.

The Facility injects sodium hypochlorite into the influent pipeline at a station in the western area of the property. Sodium hypochlorite is added at an amount necessary to maintain 1 ppm of chlorine residual within the swimming area during operating hours. Facility staff determine the dose volumetrically, with adjustments made based on the results of periodic Lagoon chlorine measurements during the day. The Facility maintains two chlorination pumps, with one operating at a time (one is used for backup).

Following chlorination, influent water is conveyed to the platform that contains piping to the Lagoon and from the Lagoon to King Harbor. The chlorinated influent is distributed throughout the Lagoon by several jets within the platform wall. The level in the Lagoon is maintained at a maximum depth of 7 feet through use of three overflow structures within the Lagoon. During Facility operation, water flows into side openings in the overflow structure and drops down within a vault. A dechlorination nozzle is affixed to the cap of the overflow structure to deliver sodium bisulfite to the surface of water within the vault. Bisulfite is added at all three overflow structures. Additional piping exists for small recreational fountains on the top of the overflow structure. Water flows by gravity through an open pipe at the bottom of the vault to a collection pipe at the platform. The Facility maintains two dechlorination pumps. Only one operates at any given time and the other is retained for backup.

Several skimmers are located on the platform. Water that enters the skimmers collects in a pipe under the platform and is dechlorinated just prior to discharge. A booster pump is located under the platform and serves to provide additional pressure to deliver water to the Lagoon.

Dechlorinated water from the overflow structures is conveyed to a single pipe and then to the discharge manhole. A valve within the discharge manhole connects to the lagoon and is only used when the Lagoon needs to be drained, approximately once every two years. When not in use the valve is locked. Prior to opening the valve, staff measure chlorine concentrations to ensure that chlorine is not detected in the Lagoon water. This discharge leaves the Facility through the permitted discharge point and must be monitored in accordance with the MRP.

REVISED TENTATIVE

B. Discharge Points and Receiving Waters

The Lagoon influent is taken from the Redondo Beach Power Plant (Power Plant) once through non-contact cooling water outfall conduit that discharges to King Harbor when the Power Plant is operating. When the Power Plant is not in operation, Lagoon influent is the tidal backwater from the discharge end of the Power Plant outfall conduit. Thus the King Harbor seawater serves as the source water for the Lagoon influent and the receiving water for Lagoon effluent. The Discharger has selected a new discharge monitoring location , where there is no tidal influence.

Previously sampling was conducted when there is a discharge and **during low tide conditions** (and/or when the water level in the vault is below the effluent discharge pipe) based on data provided by the National Oceanic and Atmospheric Administration's (NOAA), Station No. 9410840 (Santa Monica, CA). During high tide conditions, the sampling vault would be almost completely inundated with sea water and the effluent pipe would be completely submerged. Therefore, the grab samples during high tide will not be representative of the effluent. The Discharger has selected a new discharge monitoring location, where there is no tidal influence.

From the discharge manhole, up to 3.07 MGD (same as the inflow to the Lagoon) of chlorinated/dechlorinated effluent from the overflow structures or the Lagoon drain valve is discharged to King Harbor via Discharge Point 001. Discharge Point 001 consists of a pipe that extends underneath a rock revetment for approximately 60 feet, terminating in King Harbor, a water of the United States. Latitude and longitude coordinates at the discharge point are 33.8441º N, 118.3946º W.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in the existing Order for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of the previous Order are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation		Monitoring Data (from November 2010 through September 2015)	
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
Flow	MGD	--	2.3	--	2.3
pH	Standard units	6.5-8.5[1]		6.17 - 7.93[2]	
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L	20	30	4.6[3]	6.8
	lbs/day	384	575	NR[4]	NR[4]
Total Suspended Solids (TSS)	mg/L	50	75	---	100 [14]
	lbs/day	960	1,439	NR[4]	NR[4]
Oil and Grease	mg/L	10	15	18	18
	lbs/day	192	288	NR[4]	NR[4]
Turbidity	NTU	50	75	5	5
Temperature	^{0}F	--	86[5]	--	78.4

REVISED TENTATIVE

Parameter	Units	Effluent Limitation		Monitoring Data (from November 2010 through September 2015)	
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
Chlorine, Total Residual	µg/L	2	8	<10	80
	lbs/day	0.038	0.15	NR[4]	NR[4]
Fecal coliform	MPN/100 mL	200[6]	400	36[7]	8,864
Total Coliform	MPN/100 mL	1,000[8]	10,000	732[7]	24,196
Enterococcus	MPN/100 mL	35[9]	104	22[7]	1,850
Ammonia	mg/L	1.02[10]	2.05[10]	0.17	0.17
Acute Toxicity	% Survival	[11]		0[12]	
Chronic Toxicity[13]	TUc	1		>1	

1. pH must be between 6.5 and 8.5 at all times
2. Range of observed values
3. Single result occurring during off-season event on 10/12/2014.
4. NR = Not Reported
5. Temperature must not exceed 86 and the maximum temperature of the discharge must not exceed the natural receiving water temperature by more than 20^0F.
6. The fecal coliform density for any 30- day period shall not exceed a geometric mean of 200 per 100 ml nor shall more than 10 percent of the total samples during any 60-day period exceed 400 per 100 ml.
7. To calculate the geometric mean with non-detect results, a value of “1” was substituted for “<10”.
8. The geometric mean density of total coliform organisms shall be less than 1,000 per 100 ml (10 per ml). No single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml). Also, the total coliform density shall not exceed 1000 per 100 ml if the ratio of fecal to total coliform exceeds 0.1.
9. The geometric mean enterococcus density of the discharge shall not exceed 35 organisms per 100 ml for a 30-day period.
10. Total un-ionized ammonia water quality objectives of 0.035 mg/L for the 4-day average and 0.233 mg/L for the 1-hour average. These values have been translated utilizing the implementation procedure included in Resolution No. 2004-022 which revised the saltwater ammonia water quality objectives in the 1994 Basin Plan.
11. Average survival in effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90 percent, with no single test producing less than 70 percent survival.
12. Lowest percent survival of any single result.
13. The chronic toxicity of the effluent shall not exceed the monthly median trigger of 1.0 TUc in a critical life stage test. It is not an effluent limitation. However, if the effluent exceeds 1.0 TUc, the Discharger shall immediately implement accelerated chronic toxicity testing.
14. The monitoring result was in compliance with the interim limit of 120 mg/L applicable from May 10, 2010 to September 10, 2013.

REVISED TENTATIVE

D. Compliance Summary

Data submitted to the Regional Water Board during the term of Order R4-2010-0185 yielded exceedances of effluent numeric limitations as shown in the table below:

Table F-3. Summary of Compliance History

Date	Monitoring Period	Violation Type	Pollutants	Reported Value	Permit Limitation	Units
9/21/2015	3rd Quarter 2015	Maximum Daily	*Enterococcus*	1,850	104	MPN/100 mL
9/21/2015	3rd Quarter 2015	Maximum Daily	Oil and Grease	18	15	mg/L
9/30/2015	3rd Quarter 2015	Monthly Average	Oil and Grease	18	10	mg/L

On June 6, 2014, the Regional Board issued Settlement Offer No. R4-2014-0082 for violations prior to November 2010. The EPL was later dismissed because the samples were taken at high tide and were not representative of the effluent, General Monitoring Requirement I.B of Order R4-2010-0185 requires effluent to be sampled prior to mixing with the receiving water. The sample vault is tidally influenced such that the effluent pipe may become submerged at times. To ensure that the effluent sample is collected prior to mixing with the receiving water, this Order requires samples to be collected during low tide when the water level in the discharge vault is above the water level in the effluent outfall culvert. Additionally, the effluent sample location can be modified in the future to eliminate the possibility of a tidally influenced sample with written approval by the Regional Board staff. On December 18, 2015, the Regional Board issued Settlement Offer No. R4-2015-0239, which addresses most violations from July 21, 2014 through June 30, 2015. Nine thousand dollars ($ 9,000) has been accessed for violations occurring after June 30, 2015. The Discharger paid the fine on September 22, 2016.

E. Planned Changes

The development plans for the area included in the Waterfront Final Environmental Impact Report certified on July 2016 include plans for Seaside Lagoon to be reconfigured such that the Lagoon would become a tidally influenced ocean water, sand bottom passive facility open to King Harbor. Currently, the City of Redondo Beach has made no firm decision regarding . Seaside Lagoon.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters.

REVISED TENTATIVE

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, (commencing with section 21100) of Division 13 of the Public Resources Code.

C. State and Federal Laws, Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The Regional Water Board adopted a *Water Quality Control Plan for the Los Angeles Region* (hereinafter Basin Plan) on June 13, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan. In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Seaside Lagoon is a manmade water recreation Lagoon. King Harbor is the receiving water for discharges from Seaside Lagoon. King Harbor and Santa Monica Bay are included as exceptions because they are saltwater enclosed bays. The high salinity makes them unsuitable for municipal or domestic supply. Beneficial uses applicable to King Harbor are as follows:

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	King Harbor	Existing: Industrial service supply (IND), navigation (NAV), water contact recreation (REC-1), noncontact water recreation (REC2), commercial and sport fishing (COMM), marine habitat (MAR), wildlife habitat (WILD), and rare, threatened, or endangered species (RARE).

2. **Thermal Plan.** The State Water Board adopted the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) on January 7, 1971, and amended this plan on September 18, 1975. Based on the requirements of the Thermal Plan and a White Paper developed by Regional Water Board staff entitled, *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region*, a maximum effluent temperature limitation of 86°F was determined to be appropriate for protection of aquatic life and is included in the permit. The white paper evaluated the optimum temperatures for aquatic species routinely available in surface water bodies within the Los Angeles Region including: steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. This Order addresses the water quality objective for temperature by establishing effluent limitations based on the interpretation of the Thermal Plan and the White Paper.

3. **Enclosed Bays and Estuaries Policy.** The Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Enclosed Bay and Estuaries Policy), adopted by the State Water Board as Resolution No. 95-84 on November 16, 1995, states that:

   It is the policy of the State Board that the discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries, other than the San Francisco Bay-Delta system, shall be phased out at the

REVISED TENTATIVE

earliest practicable date. Exceptions to this provision may be granted by a Regional Board only when the Regional Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge.

While the Facility discharges into King Harbor, within the enclosed bay, the swimming Lagoon effluent is comprised primarily of dechlorinated, non-contact cooling water, and therefore is exclusive of the policy. Nonetheless, this Order contains provisions necessary to protect all beneficial uses of the receiving water.

4. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.

5. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

6. **Antidegradation Policy.** Federal regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California"). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.

7. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

8. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent

REVISED TENTATIVE

limitations, receiving water limitations, and other requirements to protect the beneficial uses of waters of the state, including protecting rare, threatened, or endangered species. The discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

9. **Part 1 Trash Provisions Requirements.** The State Water Board adopted the *"Amendment to the Ocean Plan and Part I Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California"* (Trash Amendments) through Resolution 2015-0019, which was approved by OAL on December 2, 2015 and became effective upon U.S. EPA approval on January 12, 2016. The Trash Amendments apply to all surface waters of the State, with the exception of those waters within the jurisdiction of the Regional Water Board where trash or debris TMDLs are in effect prior to the effective date of the Trash Amendments. The discharge described in this Order is subject to the Trash Provisions as there are currently no Trash TMDLs for King Harbor. The Trash Amendments established a narrative water quality objective for trash and a prohibition on the discharge of trash, implemented through permits issued pursuant to CWA section 402(p), waste discharge requirements, or waivers of waste discharge requirements. No specific implementation provisions were prescribed for individual industrial permittees, and no references were made to the monitoring and reporting requirements for individual industrial permits.

   This Order implements the requirements of the Trash Provisions through the prohibition of trash discharges to the NPDES discharge points. The discharge from the Facility is expected to be a significant contributor of trash. The Trash Provisions did not prescribe specific monitoring and reporting requirements applicable to the Discharger; therefore, this Order requires the Discharger to develop and implement a Storm Water Pollution Prevention Plan (SWPPP), which shall include specific BMPs used as storm water and authorized non-storm water control measures that the Discharger will undertake to prevent the discharge of trash from the Facility to King Harbor. The Discharger is required to detail and submit to the Regional Water Board annually (through their annual SWPPP submittal) specific BMPs (storm water control measures) employed to control and prohibit the discharge of trash and other pollutants from the Facility through the NPDES discharge point

D. Impaired Water Bodies on CWA 303(d) List

Section 303(d) of the CWA requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d)-listed water bodies and pollutants, the Water Board plans to develop and adopt TMDL's that will specify waste load allocations (WLA's) for point sources and load allocations (LA's) for non-point sources, as appropriate.

On June 26, 2013, the U.S. EPA approved the State Water Board's 2012 303(d) List of Water Quality Limited Segments (hereinafter 303(d) list). The 303(d) list identifies water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations by point sources (water quality limited water bodies).

Santa Monica Bay (Offshore and Nearshore), including King Harbor, is on the 303(d) list for the following pollutants/stressors from point and non-point sources: DDT (tissue and sediment), PCBs (tissue and sediment), sediment toxicity, debris, and fish consumption advisory. Total Maximum Daily Loads (TMDL's) have been developed to address DDT and PCBs. TMDL's to address debris and sediment toxicity are both scheduled for 2019.

On November 4, 2010, Regional Water Board adopted resolution R10-010, a TMDL for debris in the nearshore and offshore areas of Santa Monica Bay. The Basin Plan amendment was adopted on May 2, 2011, and became effective on March 20, 2012. Control of debris is addressed through permits issued to the California Department of Transportation, Los Angeles County and the Cities in Los Angeles County (under Los Angeles County storm water MS4 NPDES Permit). This TMDL does not include requirements applicable to the Discharger.

Consistent with 40 C.F.R. 130.2 and 130.7, section 303(d) of the CWA and USEPA guidance for developing TMDL's in California (USEPA, 2000a), the USEPA issued the Santa Monica Bay TMDL's for DDT and PCBs on March 2, 2012. The TMDL document includes WLAs for specific Dischargers identified in Table 6-2 of the TMDL. For Discharges that are not identified in Table 6-2, the Implementation Recommendations (pg. 58 of the TMDL) specify that:

> *"Water quality-based permitting for individual POTW and industrial discharges and non-stormwater general permit discharges without specified WLAs for DDT and PCBs in Table 6-2 should continue to be conducted by permit writers following all applicable State and federal regulations, plans, and policies; for these discharges, no specific WLAs are required if water quality based permitting procedures are followed by permit writers"*

The Facility is not identified in Table 6-2 and is therefore evaluated for water quality-based permit limitations according to procedures outlined in the SIP.

E. Other Plans, Polices and Regulations

Not applicable

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

A. Discharge Prohibitions

The discharge prohibitions are based on the requirements of the Basin Plan, State Water Board's plans and policies, the Water Code, and previous permit provisions, and are consistent with the requirements set for other discharges to King Harbor that are regulated by NPDES permits.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 C.F.R. section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with part 125, section 125.3.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

a. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires U.S. EPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R. section 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. BPJ is the method used by permit writers to develop technology-based NPDES permit conditions on a case- by-case basis using all reasonably available and relevant data. Where BPJ is used, the Regional Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.

2. Applicable Technology-Based Effluent Limitations

This Order includes technology-based effluent limitations based on BPJ in accordance with 40 C.F.R. section 125.3. Numeric effluent limitations for BOD, oil and grease, turbidity, and total residual chlorine included in this Order are the same as the limitations included in Order R4-2010-0185. Pursuant to state and federal antibacksliding regulations, this Order retains effluent limitations for these pollutants as technology-based effluent limitations, as their removal would constitute backsliding. The numeric effluent limitations for these pollutants are consistent with technology-based limitations included in other orders within the State.

Order No. R4-2010-0185 required the Discharger to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). This Order requires the Discharger to update and continue to implement the SWPPP. The revised SWPPP will reflect current operations, treatment activities, and staff responsible for implementing and supporting the SWPPP. The SWPPP will outline site-specific management processes for minimizing Lagoon discharge wastewater contamination and for preventing contaminated Lagoon water from being discharged directly into King Harbor. At a minimum, the management practices should ensure that raw materials and chemicals do not come into contact with Lagoon water. This Order requires the Discharger to update the SWPPP consistent with requirements in Attachment G.

REVISED TENTATIVE

As a component of the SWPPP, the Discharger must identify Best Management Practices (BMPs) that address specific areas that are considered sources of pollutants. The BMPs shall include measures to minimize the amount of pollutants entering the discharge. The Order requires the Discharger to update the Spill Prevention Control and Countermeasure (SPCC) Plan. The SPCC Plan is required in order to report on preventive and contingency (cleanup) procedures for controlling accidental discharges and for minimizing the adverse effects of such events.

The combination of the SWPPP, BMPP, SPCCP, and existing Order limitations based on past performance and reflecting BPJ will serve as the equivalent of technology-based effluent limitations, in the absence of established ELGs, in order to carry out the purposes and intent of the CWA.

Table F-5. Summary of Technology-based Effluent Limitations – Discharge Point 001

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD	mg/L	20	30	--	--
	lbs/day[1]	512	768	--	--
Chlorine, Total Residual	µg/L	2	8	--	--
	lbs/day[1]	0.05	0.2	--	--
Oil and Grease	mg/L	10	15	--	--
	lbs/day[1]	256	384	--	--
Turbidity	NTU	50	75	--	--

[1] The mass emission rates are based on the Facility's maximum flow rate of 3.07 MGD at each Discharge Point, and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.

REVISED TENTATIVE

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

CWA Section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 C.F.R. requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBEL's when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are

contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

As noted in section II of the Limitations and Discharge Requirements, the Regional Water Board adopted a Basin Plan that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The beneficial uses applicable to King Harbor are summarized in section III.C.1 of this Fact Sheet. The Basin Plan includes both narrative and numeric water quality objectives applicable to the receiving water.

Priority pollutant water quality criteria in the CTR are applicable to King Harbor. The CTR contains both saltwater and freshwater criteria. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, the following apply, in accordance with section 131.38(c)(3), saltwater criteria apply at salinities of 10 part per thousand (ppt) and above at locations where this occurs 95 percent or more of the time. The CTR criteria for saltwater, or human health for consumption of organisms, whichever is more stringent, are used to prescribe the effluent limitations to protect the beneficial uses of King Harbor. The Regional Water Board has determined that because the discharge is within the Harbor, saltwater and human health consumption of organism CTR criteria are applicable.

REVISED TENTATIVE

Table F-6. Applicable Water Quality Criteria

CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria		
			Saltwater		Human Health for Consumption of:
			Acute	Chronic	Organisms only
		µg/L	µg/L	µg/L	µg/L
1	Antimony, Total Recoverable	4,300	--	--	4,300
2	Arsenic, Total Recoverable	36	69	36	--
5	Cadmium, Total Recoverable	9.4	42	9.4	Narrative
6	Copper, Total Recoverable	3.7	5.8	3.7	--
7	Lead, Total Recoverable	8.5	221	8.5	--
8	Mercury, Total Recoverable	0.051	Reserved	Reserved	0.051
9	Nickel, Total Recoverable	8.3	75	8.3	4,600
10	Selenium, Total Recoverable	71	291	71	Narrative
11	Silver, Total Recoverable	2.2	2.2	--	--
12	Thallium, Total Recoverable	6.3	--	--	6.3
13	Zinc, Total Recoverable	86	95	86	--

CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria		
			Saltwater		Human Health for Consumption of:
			Acute	Chronic	Organisms only
		µg/L	µg/L	µg/L	µg/L
14	Cyanide Total (as CN)	1.0	1.0	1.0	220,000

3. Reasonable Potential Analysis Methodology

In accordance with Section 1.3 of the SIP, the Regional Water Board conducts a Reasonable Potential Analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. If there are TMDL WLAs approved by U.S. EPA, then WQBELs are developed using these WLAs. Otherwise, the Regional Water Board analyzes effluent and receiving water data and identifies the maximum observed effluent concentration (MEC) and maximum background concentration (B) in the receiving water for each constituent. To determine reasonable potential, the MEC and the B are then compared with the applicable water quality objectives (C) outlined in the CTR, NTR, as well as the Basin Plan. For all pollutants that have a reasonable potential to cause or contribute to an excursion above a state water quality standard, numeric WQBELs are required.

The SIP specifies three triggers to complete a RPA:

i. Trigger 1 – if MEC ≥ C, a limitation is needed.

ii. Trigger 2 – If the background concentration B > C and the pollutant is detected in the effluent, a limitation is needed.

iii. Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, or other applicable factors indicate that a WQBEL is required.

Sufficient effluent and receiving water data are needed to conduct a complete RPA. If data are not sufficient, the Discharger will be required to gather the appropriate data for the Regional Water Board to conduct the RPA. Upon review of the data, and if the Regional Water Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

The RPA was performed using effluent and receiving water data collected by the Discharger at Monitoring Location EFF-001 from November 2010 through September 2015. This period represents the term of Order R4-2010-0185.

REVISED TENTATIVE

Table F-7. Summary Reasonable Potential Analysis–Discharge Point 001

CTR No.	Constituent	Applicable Water Quality Criteria (C) or WLA	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
1	Antimony, Total Recoverable	4,300	22	32.96	No	MEC<C & B≤C
2	Arsenic, Total Recoverable	36	28	110	Yes	B>C & pollutant detected in effluent
4	Cadmium, Total Recoverable	9.4	52	26	Yes	MEC≥C
6	Copper, Total Recoverable	3.7	80	56	Yes	MEC≥C
7	Lead, Total Recoverable	8.5	< 0.003	500	No	MEC is non-detect
8	Mercury, Total Recoverable	0.051	0.088	0.082	Yes	MEC≥C
9	Nickel, Total Recoverable	8.3	8	6	No	MEC<C & B≤C
10	Selenium, Total Recoverable	71	300	318	Yes	MEC≥C & B≥C
11	Silver, Total Recoverable	2.2	38	43	Yes	MEC≥C
12	Thallium, Total Recoverable	6.3	22	13	Yes	MEC≥C
13	Zinc, Total Recoverable	86	1,129	963	Yes	MEC≥C
14	Cyanide, Total (as CN)	1.0	2.6	--	Yes	MEC≥C

REVISED TENTATIVE

4. WQBEL Calculations

a. If a reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one or more of the three procedures contained in section 1.4 of the SIP. These procedures include:

i. If applicable and available, use the WLA established as part of a TMDL.

ii. Use of a steady-state model to derive maximum daily effluent limitations (MDEL's) and average monthly effluent limitations (AMELs).

iii. Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the Regional Water Board.

b. The WQBELs for arsenic, cadmium, copper, mercury, selenium, silver, thallium, zinc, and cyanide are based on the reasonable potential determination and are calculated according to section 1.4 of the SIP.

c. Since many of the streams in the Region have minimal upstream flows, mixing zones and dilution credits are usually not appropriate. Therefore, in this Order, no dilution credit is included. However, in accordance with the reopener provision in section VI.C.1, this Order may be reopened upon the submission by the Discharger of adequate information to establish appropriate dilution credits or a mixing zone, as determined by the Regional Water Board.

d. Saltwater criteria are used for the calculation of effluent limitations. As provided in the CTR, saltwater criteria are independent of hardness; therefore they are not adjusted based on receiving water hardness.

e. WQBELs Calculation Example

Using cyanide as an example, the following demonstrates how WQBELs were established for this Order. Attachment I summarizes the calculation of all WQBELs based on CTR criteria for this Order using the process described below. The process for developing these limitations is in accordance with section 1.4 of the SIP.

Calculation of aquatic life AMEL and MDEL:

Step 1: For each constituent requiring an effluent limitation, identify the applicable water quality criteria or objective. For each criterion, determine the effluent concentration allowance (ECA) using the following steady state equation:

ECA = C + D(C-B) when C>B, and

ECA = C when C≤B,

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. For discharges from the Facility, criteria for saltwater are independent of hardness and pH.

D = The dilution credit, and

B = The ambient background concentration

As discussed above, this Order does not allow dilution; therefore:

ECA = C

For total cyanide the applicable ECAs are (reference Table F-6).

ECA_{Acute} = 1.00 µg/L

$ECA_{Chronic}$ = 1.00 µg/L

Step 2: For each ECA based or aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic

REVISED TENTATIVE

criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 3 of the SIP and will not be repeated here.

$LTA_{acute} = ECA_{acute} \times Multiplier_{acute99}$

$LTA_{chronic} = ECA_{chronic} \times Multiplier_{chronic99}$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80 percent of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6. It the data set is greater than 10 samples, and at least 20 percent of the samples in the data set are reported as detected, the CV shall be equal to the standard deviation of the data set divided by the average of the data set.

For total cyanide, the following data were used to develop the acute and chronic LTAs using equations provided in section 1.4, Step 3 of the SIP (Table 1 of the SIP also provides this data up to three decimals):

No. of Samples	CV	ECA Multiplier$_{acute}$	ECA Multiplier$_{chronic}$
4	0.6	0.32	0.53

$LTA_{chronic} = 1.00\ \mu g/L \times 0.53 = 0.53\ \mu g/L$

$LTA_{acute} = 1.00\ \mu g/L \times 0.32 = 0.32\ \mu g/L$

Step 3: Select the most limiting (lowest) of the LTA.

LTA = most limiting of LTA_{acute} or $LTA_{chronic}$

For cyanide the most limiting LTA is LTA_{acute}

$LTA_{cyanide} = LTA_{acute} = 0.32\ \mu g/L$

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as AMEL and MDEL. The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the CV of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limitation. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 5 of the SIP and will not be repeated here.

$AMEL_{aquatic\ life} = LTA \times AMEL_{multiplier95}$

$MDEL_{aquatic\ life} = LTA \times MDEL_{multiplier99}$

REVISED TENTATIVE

AMEL multipliers are based on a 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4).

For total cyanide, the following data were used to develop the AMEL and MDEL for effluent limitations using equations provided in section 1.4, Step 5 of the SIP:

No. of Samples Per Month	CV	$Multiplier_{MDEL99}$	$Multiplier_{AMEL95}$
4	0.6	3.11	1.55

Total Cyanide

AMEL = 0.32 µg/L x 1.55 = 0.50 µg/L

MDEL = 0.32 µg/L x 3.11 = 1.00 µg/L

Step 5: For the ECA based on human health, set the AMEL equal to the $ECA_{human\ health}$

$AMEL_{human\ health} = ECA_{human\ health}$

For total cyanide,

$AMEL_{human\ health}$ = 220,000 µg/L

Step 6: Calculate the MDEL for human health by multiplying the AMEL by the ratio of $Multipler_{MDEL}$ to the $Multiplier_{AMEL}$. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

$MDEL_{human\ health} = AMEL_{human\ health}$ x ($Multiplier_{MDEL}$/ $Multiplier_{AMEL}$)

For total cyanide, the following data were used to develop the $MDEL_{human\ health}$:

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$	Ratio
4	0.6	3.11	1.55	2.01

For total cyanide:

$MDEL_{human\ health}$= 220,000 µg/L x 2.01 = 440,000 µg/L

Step 7: Select the lower of the AMEL and MDEL based on aquatic life and human health criteria as the WQBEL for the Order.

0.50 µg/L ($AMEL_{aquatic\ life}$) is less than 220,000 µg/L ($AMEL_{human\ health}$); 0.50 µg/L ($AMEL_{aquatic\ life}$) applies

1.0 µg/L ($MDEL_{aquatic\ life}$) is less than 440,000 µg/L ($MDEL_{human\ health}$); 1.0 µg/L ($MDEL_{aquatic\ life}$) applies.

5. WQBELs Based on Basin Plan Objectives

Applicable Basin Plan objectives are summarized in the following table:

REVISED TENTATIVE

Table F-8. Applicable Basin Plan Numeric Water Quality Objectives

Constituent	Units	Water Quality Objective
pH	standard units	The pH of bays or estuaries must be between 6.5 and 8.5 at all times and ambient pH shall not be changed more than 0.2 units from natural conditions.
Bacteria	MPN/ 100 ml	Marine Waters Designated for Water Contact Recreation (REC-1) Geometric Mean Limits Total coliform density shall not exceed 1,000/100 ml. Fecal coliform density shall not exceed 200/100 ml. Enterococcus density shall not exceed 35/100 ml. Single Sample Limits Total coliform density shall not exceed 10,000/100 ml. Fecal coliform density shall not exceed 400/100 ml. Enterococcus density shall not exceed 104/100 ml. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.
Dissolved Oxygen	mg/L	The mean annual dissolved oxygen concentration of all waters shall be greater than 7.0 mg/L, and no single determination shall be less than 5.0 mg/L, except when natural conditions cause lesser concentrations.
Turbidity	NTU	Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%. Where natural turbidity is greater than 50 NTU increases shall not exceed 10%.
Chlorine, Total Residual	mg/L	Chlorine residual shall not be present in surface water discharges at concentrations that exceed 0.1 mg/L.

a. **pH.** This Order includes effluent and receiving water limitations for pH to ensure compliance with Basin Plan Objectives for pH. These effluent limitations are retained from Order R4-2010-0185.

b. **Bacteria.** Order R4-2010-0185 included effluent limitations for bacteria equivalent to the Basin Plan Objectives. Because the Facility is a public swimming facility, there is the potential for elevated levels of bacteria in the discharge. As such, the effluent limitations from Order R4-2010-0185 are retained in this Order.

c. **Dissolved Oxygen.** This Order addresses dissolved oxygen through effluent monitoring and receiving water limitations.

d. **Turbidity**. This Order includes technology-based effluent limitations for turbidity, as discussed in this Fact Sheet section IV.B.2. The technology-based limitations are expected to be protective of the Basin Plan Objective. These effluent limitations are retained from Order R4-2010-0185.

e. **Temperature.** This Order addresses the Basin Plan objective for temperature, by including effluent limitations based on the interpretation of the Thermal Plan and the White Paper, as described in section III.C.2 of this Fact Sheet. These effluent limitations are retained from Order R4-2010-0185.

f. **Total Suspended Solids.** The Basin Plan requires that, “Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses.” This narrative objective has been translated into

REVISED TENTATIVE

a numeric effluent limitation, based on U.S. EPA's *Quality Criteria for Water* (commonly known as the "Gold Book"). In the Gold Book, U.S. EPA notes that "In a study downstream from a discharge where inert suspended solids were increased to 80 mg/L, the density of macroinvertebrates decreased by 60 percent…". This indicates that suspended solids concentrations of 80 mg/L in the receiving water resulted in adverse effects to aquatic life. Effluent limitations of 50 mg/L (monthly average) and 75 mg/L (daily maximum) were included in Order R4-2010-0185 and are being retained in this Order as their removal would constitute backsliding. The effluent limitations for TSS in Order R4-2010-0185 allowed for intake credits. Based on section 1.4.4 of the SIP the Discharger qualifies for intake credit for TSS therefore, intake credits are retained in this Order, see below for further discussion. The TSS effluent limitations are protective of the Basin Plan narrative objective for TSS.

6. Intake Credits for Metals, and TSS

a. Effluent Limitations for TSS and Metals based on Intake Water Credits

Section 1.4.4 of the SIP provides that, intake water credit for a pollutant may be established in an NPDES permit based on a Discharger's demonstration that the following conditions are met:

1. The observed maximum ambient background concentration, as determined in section 1.4.3.1 and the intake water concentration of the pollutant exceeds the most stringent applicable criterion/objective for that pollutant;
2. The intake water credits provided are consistent with any TMDL applicable to the discharge that has been approved by the Regional Water Board, State Water Board, and U.S. EPA;
3. The intake water is from the same water body as the receiving water body. The discharger may demonstrate this condition by showing that;
    a. the ambient background concentration of the pollutant in the receiving water, excluding any amount of the pollutant in the facility's discharge, is similar to that of the intake water;
    b. there is a direct hydrological connection between the intake and discharge points;
    c. the water quality characteristics are similar in the intake and receiving waters; and
    d. the intake water pollutant would have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effect had it not been diverted by the discharger.

    The Regional Water Board may also consider other factors when determining whether the intake water is from the same water body as the receiving water body;
4. The facility does not alter the intake water pollutant chemically or physically in a manner that adversely affects water quality and beneficial uses; and
5. The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body.

REVISED TENTATIVE

The SIP conditions in section 1.4.4 are appropriate for evaluating intake credits for TSS limitations as the TSS WQBELs are protective of water quality criteria (see section VI.C.5.k). The previous Order allowed for TSS intake credits based on 40 CFR 122.45(g) which are evaluation conditions for technology-based limitations. Upon further review, the Regional Water Board has determined that the TSS limitation is categorized as a WQBEL and intake credits are more appropriately evaluated following the five SIP conditions listed above. The conditions above are satisfied for TSS and CTR criteria as follows:

Criteria 1. Intake and effluent data, as presented below, show maximum metals concentrations in the intake and effluent collected during the operating seasons from 2011 through 2014. For TSS, the data was collected from the 2012 through 2014 operating seasons. In 2011, the Facility conducted a separate study that showed intake concentrations and effluent concentrations above the effluent limitations protective of the Basin Plan objective. As shown in the table below, both the intake and effluent concentrations exceed the most stringent CTR criteria. For TSS, the intake and effluent concentrations exceed the numeric criteria developed to implement the Basin Plan objective for TSS.

Table F-9. Intake Credit Criteria 1 Data

Constituent	Units	Most Stringent Water Quality Criteria/Objective	INF-001 Maximum Conc.	INF-002 Maximum Conc.	EFF-001 Maximum Conc.	Satisfy Criteria 1?
Arsenic	µg/L	36	47	36	28	Yes
Cadmium	µg/L	9.4	214	100	52	Yes
Copper	µg/L	3.7	74	70	80	Yes
Selenium	µg/L	71	291	271	300	Yes
Silver	µg/L	2.2	37	27	38	Yes
Thallium	µg/L	6.3	25	24	22	Yes
Zinc	µg/L	86	1,183	901	1,129	Yes
TSS	mg/L	80[1]	74	80	100	Yes

1. Criteria to implement the narrative water quality objective for TSS.

Criteria 2. There are no TMDLs for King Harbor nor is King Harbor listed on the 2012 CWA 303(d) list of water quality limited segments. Santa Monica Bay (Offshore and Nearshore), including King Harbor, is on the 303(d) list for the following pollutants/stressors from point and non-point sources: DDT (tissue and sediment), PCBs (tissue and sediment), sediment toxicity, debris, and fish consumption advisory. TMDL's have been developed to address DDT and PCBs. TMDLs to address debris and sediment toxicity are both scheduled for 2019. Arsenic, cadmium, copper, selenium, silver, thallium, zinc, and TSS are not 303 (d) listed pollutants nor are they addressed by TMDLs. Therefore, the intake credits are consistent with applicable TMDLs and satisfy Criteria 2.

Criteria 3a. The intake water is from the same water body as the receiving water body. As shown in the table below, the ambient background maximum concentrations of the pollutant in the receiving water (RSW-001) is similar to that of the intake water. Variations observed may be attributed to temporal variability, normal water quality variability, or analytical variability.

REVISED TENTATIVE

Table F-10. Intake Credit Criteria 3b Data

Constituent	Units	RSW-001 Maximum Conc.	INF-001 Maximum Conc.[1]	INF-002 Maximum Conc.[1]	Satisfy Criteria 3a?
Arsenic	µg/L	51	47	36	Yes
Cadmium	µg/L	26	214	100	Yes[2]
Copper	µg/L	56	74	70	Yes
Selenium	µg/L	318	291	271	Yes[2]
Silver	µg/L	43	37	27	Yes
Thallium	µg/L	13	25	24	Yes
Zinc	µg/L	963	1183	901	Yes
TSS	mg/L	96	74	80	Yes

1. Order R4-2010-0185 specifies that two influent samples shall be collected, with the first influent sample (INF-001) collected two hours prior to the effluent sample. The second influent sample (INF-002) is collected at approximately the same time as the effluent sample.
2. Cadmium was detected on only one out of 33 sample dates. On all other sample dates the results of RSW-001, INF-001, and INF-002 were all non-detects indicating similarity between RSW-001, INF-001, and INF-002.

Criteria 3b. The intake water at the Facility consists of water directly from King Harbor or non-contact cooling water from Redondo Beach Generating Station (RBGS) intake structure located between the breakwaters that form the entrance to King Harbor. The breakwater area is directly connected to the area of King Harbor closer to shore where the discharge occurs. Both intake locations are hydrologically connected to the Discharge Point, satisfying criteria 3b.

Criteria 3c. King Harbor, where all intake water to the Facility originates and is discharged, is continuously flushed by the Santa Monica Bay. Therefore the receiving water characteristics are similar to the intake water characteristics.

Criteria 3d. The cooling water discharge from RBGS would be discharged to King Harbor whether or not the Facility was using it as intake water. The Facility's intake source from King Harbor is also near the Discharge Point. The Facility's discharge does not alter currents or mixing within the Harbor and the intake waters will reach the location of the receiving waters through natural mixing processes, thus satisfying Criteria 3d.

Criteria 4. With the exception of chlorine addition and dechlorination, the Facility does not alter the intake water chemically or physically. Neither chlorination or dechlorination is expected to alter the constituents for which intake credits are sought and no adverse impacts on water quality or beneficial uses are expected.

Criteria 5. As discussed under Criteria 3d, the intake water is present in King Harbor regardless of whether the Facility is operating. As this intake water is essentially passing through the Facility, neither the timing nor the location of the discharge cause adverse effects on water quality and beneficial uses.

According to Section 1.4.4 of the SIP, the Regional Water Board may establish effluent limitations allowing the facility to discharge a mass and concentration of the intake water pollutant that is no greater than the mass and concentration found in the facility's intake water. The Regional Water Board may also determine

REVISED TENTATIVE

compliance by simultaneously monitoring the pollutant concentrations in the intake water and in the effluent.

The monthly average intake concentration of pollutant is calculated by adding all analytical monitoring results in a calendar month divided by the number of monitoring events for that month. If only a single sample is taken during the calendar month then the analytical result for that sample will be considered as the monthly average value or result.

If the influent water pollutant concentration does not exceed the average monthly limitation then the limitations are applied as noted in Table F-10 Summary of Final Effluent Limitations Discharge Point 001. If the influent water pollutant concentration exceeds the average monthly limitation but does not exceed the maximum daily limitation then compliance with the average monthly limitation will be determined based on intake water credits and compliance with the maximum daily limitation is applied as noted in Table F-10. If the influent water pollutant concentration exceeds the maximum daily limitation then compliance with both the average monthly and the maximum daily will be determined based on intake water credits.

When applying intake water credit, the pollutant effluent limitation is equal to the maximum pollutant concentration in the influent water, which is the same as the intake water. The equation is as follows:

Pollutant effluent limitation with intake water credit = maximum pollutant influent water concentration

Two influent samples shall be collected to address the variability of the influent water. The first influent sample shall be collected two hours prior to the effluent sample. The second influent sample shall be collected at approximately the same time as the effluent sample. When evaluating compliance with the pollutant effluent limitations based on intake water credit, compare the pollutant effluent concentration to the maximum copper influent water concentration as follows:

If pollutant effluent concentration > maximum pollutant influent water concentration then violation.

If pollutant effluent concentration ≤ maximum pollutant influent water concentration then in compliance.

If pollutant monthly average effluent concentration ≤ monthly average pollutant influent concentration then in compliance.

(If only one effluent sample is taken per month, then the monitoring result has to comply with the monthly average limitation based on intake credits).

The intake credits do not allow the Facility to contribute additional TSS when the exceedance of effluent limitations is due to intake concentrations.

7. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative “no toxics in toxic amounts” criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is

conducted over a longer period of time and may measure mortality, reproduction, and growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses by aquatic organisms. Detrimental response includes, but is not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota.

Order R4-2010-0185 contained acute toxicity limitations and monitoring requirements in accordance with the Basin Plan, in which the acute toxicity objective for discharges dictates that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90 percent, with no single test having less than 70 percent survival. During the period of November 2010 through September 2015, acute toxicity results varied from 0 percent to 100 percent survival.

In addition to the Basin Plan requirements, Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. During the period of November 2010 through September 2015, chronic toxicity results varied from <1 TUC to >1 TUc**.** Samples collected on August 12, 2013, demonstrated chronic toxicity with an NOEC of > 1 TUc. In addition, the Facility treats Lagoon water with chlorine, which is highly toxic to aquatic life. Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects. For these reasons a WET limitation is retained in this Order. Chronic toxicity provides a more sensitive endpoint. Only chronic toxicity requirements are included in this order.

The WET testing requirements for chronic toxicity in this Order are based on U.S. EPA's 2010 Test of Significant Toxicity (TST) 2-concentration hypothesis testing approach in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) as an improved hypothesis-testing tool to evaluate data from U.S. EPA's toxicity test methods. The TST hypothesis testing approach more reliably identifies toxicity—in relation to the chronic (0.25 or more) and acute (0.20 or more) mean responses of regulatory management concern—than the current NOEC hypothesis-testing approach. The TST is the superior approach for addressing statistical uncertainty when used in combination with U.S. EPA's toxicity test methods and is implemented in federal permits issued by U.S. EPA Region 9.

The chronic toxicity IWC for Discharge Point 001 is 100/(0+1) = 100 percent effluent.

The TST's null hypothesis for chronic toxicity is:

> H0: Mean response (In-stream Waste Concentration (IWC) in percent effluent) ≤ 0.75 mean response (Control).

Results obtained from a single-concentration chronic toxicity test are analyzed using the TST approach and an acceptable level of chronic toxicity is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

The MDEL for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed using the TST approach, results in "Fail" and the "Percent Effect" is ≥0.50. The Median Monthly Effluent Limitation (MMEL) for chronic toxicity is exceeded and a violation will be flagged when the median of no more than three independent chronic toxicity tests, conducted within the same calendar month and analyzed using the TST

REVISED TENTATIVE

approach, results in “Fail”. The MMEL for chronic toxicity shall only apply when there is a discharge more than one day in a calendar month period. During such calendar months, exactly three independent toxicity tests are required when one toxicity test results in “Fail”.

D. Final Effluent Limitation Considerations

A chronic toxicity effluent limitation (evaluated using the TST statistical approach), which is a more stringent requirement than acute toxicity, is included in this Order in lieu of acute toxicity, as it is protective of both the numeric and the narrative acute toxicity Basin Plan water quality objectives. The chronic toxicity limitation is modified to reflect TST methodology. In addition, this Order includes new effluent limitations for arsenic, cadmium, copper, mercury, selenium, silver, thallium, zinc, and cyanide, because effluent concentrations of these pollutants demonstrated reasonable potential to exceed CTR criteria. Ammonia did not demonstrate reasonable potential to exceed the Basin Plan Objectives; therefore, effluent limitations for ammonia are not included in this Order. All other limitations from Order R4-2010-0185 have been retained in this Order.

1. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. This permit carries over all effluent limitations established in Order R4-2010-0185, with the exception of acute toxicity and ammonia. The Regional Water Board has determined that the numeric effluent limitations continue to be applicable to the Facility.

Order R4-2010-0185 contained an acute toxicity effluent limitation in addition to a chronic limitation in accordance with the Basin Plan’s narrative objective for toxicity. This Order includes a chronic toxicity effluent limitation to be assessed using the TST approach which, under this testing framework, is protective of the Basin Plan’s narrative objective for toxicity. The chronic toxicity limitation addresses the acute mortality endpoint and the chronic endpoints of decreases in growth and reproduction. The chronic toxicity limitation is protective of acute toxicity and is no less stringent than the acute limit included in the previous Order.

Order R4-2010-0185 established effluent limitations for ammonia based on the RPA. The RPA conducted for this Order included effluent and receiving water monitoring data collected after issuance of Order R4-2010-0185 (November 2010 through December 2016). Based on this new data, the discharge did not demonstrate reasonable potential to exceed the applicable Basin Plan objectives for ammonia. CWA section 402(o)(1) allows for relaxation of WQBELs where new information (other than revised regulations, guidance, or test methods) is available that was not available at the time of permit issuance and that would have justified a less stringent effluent limitation. The more recent monitoring data constitutes new information that was not available when the limitation was established and is therefore an allowable exception to anti-backsliding. This Order requires monthly effluent monitoring during the peak season and once per discharge during off-peak months for ammonia as well as receiving water monitoring requirements.

2. Antidegradation Policies

Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California’s

antidegradation policy in State Water Board Resolution 68-16. Resolution 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan and the SIP implement, and incorporate by reference, both the State and federal antidegradation policies. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge.

The permitted discharge is not a new discharge. This Order does not allow for a reduction in the level of treatment. The final limitations in this Order, which include concentration based and mass based limitations, hold the discharger to performance levels that will not cause or contribute to water quality impairment or degradation of the water quality of King Harbor. Therefore, the permitted discharge is consistent with the state's antidegradation policy. .

3. Mass-based Effluent Limitations

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. 40 C.F.R. section 122.45(f)(1) requires that all permit limitations, standards or prohibitions be expressed in terms of mass units except under the following conditions: (1) for pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations; (2) when applicable standards or limitations are expressed in terms of other units of measure; or (3) if in establishing technology-based permit limitations on a case-by-case basis, limitations based on mass are infeasible because the mass or pollutant cannot be related to a measure of production.

Mass-based effluent limitations are established using the following formula:

Mass (lbs/day) = flow rate (MGD) x 8.34 x effluent limitation (mg/L)

where: Mass = mass limitation for a pollutant (lbs/day)

Effluent limitation = concentration limitation for a pollutant (mg/L)

Flow rate = discharge flow rate (MGD)

According to the Report of Waste Discharge submitted by the Discharger, the maximum permitted discharge from Seaside Lagoon to Discharge Point 001 is 3.07MGD. As such, the mass-based effluent limitations will be based on this flow.

4. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD, TSS, oil and grease, turbidity, and total residual chlorine. Restrictions on these pollutants are discussed in Section IV.B of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements.

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for

REVISED TENTATIVE

calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR implemented by the SIP, which was approved by U.S. EPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by U.S. EPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 C.F.R. section 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order were approved by U.S. EPA and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

5. Summary of Final Effluent Limitations

Table F-11. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations				Basis[1]
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Conventional Pollutants						
BOD	mg/L	20	30	--	--	E, BPJ
	lbs/day[2]	512	768	--	--	
Oil and Grease	mg/L	10	15	--	--	E, BPJ
	lbs/day[2]	256	384	--	--	
TSS [6]	mg/L	50	75	--	--	E, BPJ
	lbs/day[2]	1,280	1,920	--	--	
pH	Standard Units	--	--	6.5	8.5	E, BP
Non-Conventional Pollutants						
Chlorine, Total Recoverable	µg/L	2	8	--	--	E, BPJ
	lbs/day[2]	0.05	0.2	--	--	
Chronic Toxicity[3]	Pass or Fail, % Effect	Pass[4]	Pass or % Effect <50	--	--	E, BPJ
Bacteria	MPN/100 ml	[5]				E, BPJ
Temperature	Degrees F	--	--	--	86	E, TP, WP
Turbidity	NTU	50	75	--	--	E, BPJ
Priority Pollutants						
Arsenic, Total Recoverable [6]	µg/L	26	66	--	--	CTR/SIP
	lbs/day[2]	0.67	1.74	--	--	
Cadmium, Total Recoverable [6]	µg/L	7.7	15	--	--	CTR/SIP
	lbs/day[2]	0.2	0.4	--	--	
Copper, Total Recoverable [6]	µg/L	1.9	5.8	--	--	CTR/SIP
	lbs/day[2]	0.05	0.15	--	--	

REVISED TENTATIVE

Parameter	Units	Effluent Limitations				Basis[1]
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Mercury, Total Recoverable	µg/L	0.051	0.10	--	--	CTR/SIP
	lbs/day[2]	0.0013	0.0025	--	--	
Selenium, Total Recoverable [6]	µg/L	56	122	--	--	CTR/SIP
	lbs/day[2]	1.4	3.1	--	--	
Silver, Total Recoverable[6]	µg/L	0.92	2.2	--	--	CTR/SIP
	lbs/day[2]	0.024	0.06	--	--	
Thallium, Total Recoverable[6]	µg/L	6.3	13	--	--	CTR/SIP
	lbs/day[2]	0.16	0.33	--	--	
Zinc, Total Recoverable [6]	µg/L	34	95	--	--	CTR/SIP
	lbs/day[2]	0.9	2.4	--	--	
Cyanide, Total (as CN)	µg/L	0.50	1.0	--	--	CTR/SIP
	lbs/day[2]	0.013	0.025	--	--	

1. E = Existing Order; BPJ = Best Professional Judgment; BP = Basin Plan; CTR = California Toxic Rule; SIP = State Implementation Policy; WP = White Paper.
2. Mass loading limitations are based on a maximum flow of 3.07MGD and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day. The mass loading limitations are applicable to Discharge Point 001.
3. The median monthly effluent limitation (MMEL) shall be reported as "Pass" or "Fail". The maximum daily effluent limitation (MDEL) shall be reported as "Pass" or "Fail". The MMEL for chronic toxicity shall only apply when there is a discharge more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests are required when one toxicity test results in a "Fail".
4. This is a MMEL.
5. The discharge shall not exceed following the limitations for bacteria:
    a. Geometric Mean Limits
        1. Total coliform density shall not exceed 1,000/100 ml.
        2. Fecal coliform density shall not exceed 200/100 ml.
        3. *Enterococcus* density shall not exceed 35/100 ml
    b. Single Sample Limits
        1. Total coliform density shall not exceed 10,000/100 ml.
        2. Fecal coliform density shall not exceed 400/100 ml.
        3. Enterococcus density shall not exceed 104/100 ml.
        4. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.
6. If the influent water pollutant concentration (measured at influent to the Lagoon) does not exceed the average monthly limitation then the limitations are applied as noted in the Table. If the influent water pollutant concentration exceeds the average monthly limitation but does not exceed the maximum daily limitation then compliance with the average monthly limitation will be determined based on intake water credits and compliance with the maximum daily limitation is applied as noted in the Table. If the influent water pollutant concentration exceeds the maximum daily limitation then compliance with both the average monthly and the maximum daily will be determined based on intake water credits. When determining compliance based on intake water credit, the pollutant effluent limitation is equal to the maximum pollutant concentration in the influent water. The equation is as follows:

    Maximum Pollutant Effluent Limitation with Intake Water Credit = Maximum Pollutant Influent Water Concentration

    Monthly Pollutant Effluent Limitation with Intake Water Credit = Monthly Pollutant Influent Water Concentration

E. Interim Effluent Limitations

REVISED TENTATIVE

Not applicable

F. Land Discharge Specifications

Not applicable

G. Recycling Specifications

Not applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (40 C.F.R. section 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water. If there is reasonable potential or a U.S. EPA-approved TMDL WLA, then WQBELs are included in this Order to ensure protection of water quality standards.

B. Groundwater

Not applicable

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 C.F.R. allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

These provisions are based on section 123 and the previous Order. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new federal regulations, modification in toxicity requirements, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

nitial Investigation Toxicity Reduction Evaluation (TRE) Workplan. This provision is based on section 4 of the SIP, Toxicity Control Provisions, which establishes minimum toxicity control requirements for implementing the narrative toxicity objective for aquatic life protection established in the basin plans of the State of California.

3. Best Management Practices and Pollution Prevention

This provision is based on 40 C.F.R. section 122.44(k) and includes the requirement to develop a SWPPP and BMPs.

a. Stormwater Pollution Prevention Plan (SWPPP). The Discharger is required to update and continue to implement a SWPPP in accordance with Attachment G of this Order. The SWPPP will outline site-specific management processes for minimizing stormwater runoff contamination and for preventing trash and contaminated stormwater runoff from being discharged directly into the receiving water. The management practices should ensure that raw materials and chemicals do not come into contact with storm water, and to prevent the entrainment of trash in storm water that is discharged to King Harbor. SWPPP requirements are included as Attachment G, based on 40 CFR 122.44(k).

b. Spill Contingency Plan (SCP). Since spill or overflow may occur in the facility, this Order requires the Discharger to prepare a SCP for the Facility. The Discharger shall review and update, if necessary, the SCP after each incident and make it available for the facility personnel at all times.

4. Construction, Operation, and Maintenance Specifications

This provision is based on the requirements of section 122.41(e).

5. Special Provisions for Municipal Facilities (POTWs Only)

Not applicable

6. Other Special Provisions

Not applicable

7. Compliance Schedules

Not applicable

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 C.F.R. sections 122.41(h), (j)-(*l*), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting,

REVISED TENTATIVE

and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment E of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring

Influent monitoring is required to collect data on the characteristics of the intake water and to assess compliance with the effluent limitations for TSS and metals.

According to section 1.4.4 of the SIP, the Regional Water Board may consider priority pollutants in intake water on a pollutant-by-pollutant basis when establishing WQBELs, provided the Discharger has demonstrated certain conditions specified in section 1.4.4 of the SIP. 40 CFR Part 122.45 provides a similar direction for TSS. The Discharger has demonstrated that intake water credit is appropriate for the discharge of TSS and metals. This Order requires influent monitoring of cyanide for future evaluation of the pollutant for intake credits. Therefore, the Discharger is required to monitor the intake water for TSS, metals, and cyanide at the specified frequency to provide data for the Regional Water Board to consider intake water credits.

B. Effluent Monitoring – Discharge Point 001

1. Monitoring for pollutants expected to be present in the discharge will be required as established in the MRP (Attachment E). To demonstrate compliance with established effluent limitations, the Order includes monitoring requirements for parameters for which effluent limitations have been established.
2. This Order retains the monitoring frequency from Order R4-2010-0185 for flow, BOD, TSS, turbidity, temperature, total residual chlorine, bacteria, metals, and chronic toxicity.
3. The frequency for monitoring pH, ammonia, arsenic, mercury, and oil and grease has been increased from once per year to once per month, consistent with several other parameters for which limitations are established.
4. The SIP states that the Regional Water Board will require periodic monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established. This Order requires the Discharger to conduct annual monitoring for the remaining CTR priority pollutants. The Regional Water Board will use the additional data to conduct an RPA and determine if additional WQBELs are required. The Regional Water Board may reopen the permit to incorporate additional effluent limitations and requirements, if necessary.
5. Order R4-2010-0185 allowed for a flow to be estimated. This Order requires the Discharger to install and maintain an effluent flow meter in order to ensure that accurate flow volume is obtained for calculating mass emissions.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. A chronic toxicity test measures mortality, reproduction, and growth. A chemical at a low concentration can have chronic effects but no acute effects. Therefore, chronic toxicity is a more stringent requirement that acute toxicity. For this Order, chronic toxicity effluent limit is included and monitoring in the discharge is required. The chronic toxicity testing results are analyzed using the U.S. EPA's 2010 TST statistical

REVISED TENTATIVE

approach. The chronic toxicity effluent limitations are as stringent as necessary to protect the receiving water beneficial uses.

D. Receiving Water Monitoring

1. Surface Water

This Order includes receiving water limitations and therefore, monitoring requirements are included in the MRP to determine compliance with the receiving water limitations established in Limitations and Discharge Requirements**.**

According to the SIP, the Discharger is required to monitor the ambient receiving water for the CTR priority pollutants, to determine reasonable potential. Accordingly, the Regional Water Board is requiring that the Discharger conduct ambient receiving water monitoring of the CTR priority pollutants at Monitoring Location RSW-001. The Discharger must analyze temperature, pH, ammonia, and salinity of the ambient receiving water at the same time the samples are collected for priority pollutant analysis. Additional data on pH and salinity is necessary to translate the ammonia water quality objective.

Order R4-2010-0185 required monitoring for hardness in the receiving water. Typically, receiving water hardness is collected for calculation of some CTR freshwater aquatic life criteria for metals. Saltwater criteria were used in this Order to evaluate reasonable potential and calculate WQBELs. As per the CTR, saltwater criteria are independent of hardness; therefore this data is not needed to adjust criteria or calculate WQBELs. This requirement is not retained in this Order as the Facility operations are not expected to affect the receiving water hardness..

2. Groundwater

Not applicable

E. Other Monitoring Requirements

Not applicable

VIII. PUBLIC PARTICIPATION

The Regional Water Board has considered the issuance of WDRs that will serve as an NPDES permit for Seaside Lagoon. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations.

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process electronically at losangeles@waterboards.ca.gov with a copy to Mazhar.Ali@waterboards.ca.gov.

To be fully responded to by staff and considered by the Regional Water Board, the written comments were due at the Regional Water Board office by 5:00 p.m. on May 5, 2017. The revised portions of the revised tentative permit appear in strikeout/underline format for deletion and insertions.

REVISED TENTATIVE

C. Public Hearing

The Regional Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: September 7~~June 1~~, 2017
Time: 9:00 a.m.
Location: City of Simi Valley Council Chambers~~Metropolitan Water District of Southern California~~
2929 Tapo Canyon Road ~~700 North Alameda Street~~
Simi Valley ~~Los Angeles~~, California

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony was heard; however, for accuracy of the record, important testimony was requested to be in writing.

D. Reconsideration of Waste Discharge Requirements

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be received by the State Water Board at the following address within 30 calendar days of the Regional Water Board's action:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

For instructions on how to file a petition for review, see
http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling 213-576-6600.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Mazhar Ali at 213-576-6652 or at mazhar.ali@waterboards.ca.gov.

REVISED TENTATIVE

ATTACHMENT G – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

I. Implementation Schedule

A storm water pollution prevention plan (SWPPP) shall be developed and submitted to the Regional Water Board within 90 days following the adoption of this Order. The SWPPP shall be implemented for each facility covered by this Order within 10 days of approval from the Regional Water Board, or 6-months from the date of the submittal of the SWPPP to the Regional Water Board (whichever comes first).

II. Objectives

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify and implement site- specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, over-head coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

III. Planning and Organization

A. Pollution Prevention Team

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Attachment E of this Permit. The SWPPP shall clearly identify the Permit related responsibilities, duties, and activities of each team member. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

B. Review Other Requirements and Existing Facility Plans

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, State, and Federal requirements that impact, complement, or are consistent with the requirements of this Permit. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or

REVISED TENTATIVE

relate to the requirements of this Permit. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

IV. Site Map

A. The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

TABLE A
FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS

PLANNING AND ORGANIZATION
Form Pollution Prevention Team
Review other plans

ASSESSMENT PHASE
Develop a site map
Identify potential pollutant sources
Inventory of materials and chemicals
List significant spills and leaks
Identify non-storm water discharges
Assess pollutant risks

BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE
Non-structural BMPs
Structural BMPs
Select activity and site-specific BMPs

IMPLEMENTATION PHASE
Train employees
Implement BMPs
Conduct recordkeeping and reporting

EVALUATION / MONITORING
Conduct annual site evaluation
Review monitoring information
Evaluate BMPs
Review and revise SWPPP

REVISED TENTATIVE

The following information shall be included on the site map:

A. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.

B. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

C. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.

D. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in section VI.A.4. below have occurred.

E. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

V. List of Significant Materials

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

VI. Description of Potential Pollutant Sources

A. The SWPPP shall include a narrative description of the facility's industrial activities, as identified in section IV.E. above, associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

1. **Industrial Processes.** Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

2. **Material Handling and Storage Areas.** Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the

REVISED TENTATIVE

shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

3. **Dust and Particulate Generating Activities.** Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

4. **Significant Spills and Leaks.** Describe materials that have spilled or leaked in significant quantities in storm water discharges or non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 CFR, Part 302) that have been discharged to storm water as reported on U.S. Environmental Protection Agency (USEPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 Code of Federal Regulations [CFR], Parts 110, 117, and 302).

   The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges, and the preventative measures taken to ensure spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this Permit.

5. **Non-Storm Water Discharges.** Facility operators shall investigate the facility to identify all non-storm water discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

   All non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area.

   Non-storm water discharges that contain significant quantities of pollutants or that do not meet the conditions provided in Special Conditions of the general permit for Dischargers of Storm Water Associated with Industrial Activities (State Board Order No. 2014-0057-DWQ, NPDES No. CAS000001, adopted on April 1, 2014) are prohibited by this Permit (Examples of prohibited non-storm water discharges are contact and non-contact cooling water, rinse water, wash water, etc.). Non-storm water discharges that meet the conditions provided in Special Conditions of the general permit for Dischargers of Storm Water Associated with Industrial Activities are authorized by this Permit. The SWPPP must include BMPs to prevent or reduce contact of non-storm water discharges with significant materials or equipment.

6. **Soil Erosion.** Describe the facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.

B. The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and potential pollutants. This information should be summarized similar to Table B below. The last column of Table B, "Best Management Practices", should be completed in accordance with section VIII below.

REVISED TENTATIVE

VII. Assessment of Potential Pollutant Sources

A. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in section VI above to determine:

1. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and

2. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.

B. Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. The BMPs will be narratively described in section VIII below.

VIII. Storm Water Best Management Practices

The SWPPP shall include a narrative description of the storm water BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (sections VI. And VII above). The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

REVISED TENTATIVE

TABLE B
EXAMPLE
ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES
SUMMARY

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery. Spills caused by topping off fuel tanks. Hosing or washing down fuel oil fuel area. Leaking storage tanks. Rainfall running off fuel oil, and rainfall running onto and off fueling area.	fuel oil	Use spill and overflow protection. Minimize run-on of storm water into the fueling area. Cover fueling area. Use dry cleanup methods rather than hosing down area. Implement proper spill prevention control program. Implement adequate preventative maintenance program to preventive tank and line leaks. Inspect fueling areas regularly to detect problems before they occur. Train employees on proper fueling, cleanup, and spill response techniques.

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table B.

Facility operators shall consider the following BMPs for implementation at the facility:

A. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs options before considering additional structural BMPs (see section VIII.B below). Below is a list of non-structural BMPs that should be considered:

1. **Good Housekeeping.** Good housekeeping generally consists of practical procedures to maintain a clean and orderly facility.

2. **Preventive Maintenance.** Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

REVISED TENTATIVE

3. **Spill Response.** This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

4. **Material Handling and Storage.** This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

5. **Employee Training.** This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.

6. **Waste Handling/Recycling.** This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

7. **Recordkeeping and Internal Reporting.** This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

8. **Erosion Control and Site Stabilization.** This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

9. **Inspections.** This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.

10. **Quality Assurance.** This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

B. Structural BMPs.

Where non-structural BMPs as identified in section VIII.A.above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that should be considered:

1. **Overhead Coverage.** This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

2. **Retention Ponds.** This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.

3. **Control Devices.** This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

REVISED TENTATIVE

4. **Secondary Containment Structures.** This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

5. **Treatment.** This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

IX. Annual Comprehensive Site Compliance Evaluation

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

A. A review of all visual observation records, inspection records, and sampling and analysis results.

B. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.

C. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.

D. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in section X.E., for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions V.B.5 of Attachment D.

X. SWPPP General Requirements

A. The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.

B. The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.

C. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge,

REVISED TENTATIVE

(ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.

D. The SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this Permit.

E. When any part of the SWPPP is infeasible to implement due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

F. The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional Water Board under Section 308(b) of the Clean Water Act.

ATTACHMENT H – STATE WATER BOARD MINIMUM LEVELS

The Minimum Levels (ML's) in micrograms per liter (µg/L) in this appendix are for use in reporting and compliance determination purposes in accordance with section 2.4 of the State Implementation Policy. These ML's were derived from data for priority pollutants provided by State certified analytical laboratories in 1997 and 1998. These ML's shall be used until new values are adopted by the State Water Board and become effective. The following tables (Tables 2a - 2d) present ML's for four major chemical groupings: volatile substances, semi-volatile substances, inorganics, and pesticides and PCBs.

Table 2a - VOLATILE SUBSTANCES*	GC	GCMS
1,1 Dichloroethane	0.5	1
1,1 Dichloroethylene	0.5	2
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
1,1,2,2 Tetrachloroethane	0.5	1
1,2 Dichlorobenzene (volatile)	0.5	2
1,2 Dichloroethane	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichlorobenzene (volatile)	0.5	2
1,3 Dichloropropene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Methyl Bromide	1.0	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromo-methane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Chloromethane	0.5	2
Dichlorobromo-methane	0.5	2
Dichloromethane	0.5	2
Ethylbenzene	0.5	2
Tetrachloroethylene	0.5	2
Toluene	0.5	2
Trans-1,2 Dichloroethylene	0.5	1
Trichloroethene	0.5	2
Vinyl Chloride	0.5	2

REVISED TENTATIVE

*The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Benzo (a) Anthracene	10	5		
1,2 Dichlorobenzene (semivolatile)	2	2		
1,2 Diphenylhydrazine		1		
1,2,4 Trichlorobenzene	1	5		
1,3 Dichlorobenzene (semivolatile)	2	1		
1,4 Dichlorobenzene (semivolatile)	2	1		
2 Chlorophenol	2	5		
2,4 Dichlorophenol	1	5		
2,4 Dimethylphenol	1	2		
2,4 Dinitrophenol	5	5		
2,4 Dinitrotoluene	10	5		
2,4,6 Trichlorophenol	10	10		
2,6 Dinitrotoluene		5		
2- Nitrophenol		10		
2-Chloroethyl vinyl ether	1	1		
2-Chloronaphthalene		10		
3,3' Dichlorobenzidine		5		
Benzo (b) Fluoranthene		10	10	
3-Methyl-Chlorophenol	5	1		
4,6 Dinitro-2-methylphenol	10	5		
4- Nitrophenol	5	10		
4-Bromophenyl phenyl ether	10	5		
4-Chlorophenyl phenyl ether		5		
Acenaphthene	1	1	0.5	
Acenaphthylene		10	0.2	
Anthracene		10	2	
Benzidine		5		
Benzo(a) pyrene		10	2	
Benzo(g,h,i)perylene		5	0.1	
Benzo(k)fluoranthene		10	2	
bis 2-(1-Chloroethoxyl) methane		5		
bis(2-chloroethyl) ether	10	1		
bis(2-Chloroisopropyl) ether	10	2		
bis(2-Ethylhexyl) phthalate	10	5		
Butyl benzyl phthalate	10	10		
Chrysene		10	5	
di-n-Butyl phthalate		10		
di-n-Octyl phthalate		10		
Dibenzo(a,h)-anthracene		10	0.1	
Diethyl phthalate	10	2		
Dimethyl phthalate	10	2		
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	
Hexachloro-cyclopentadiene	5	5		
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
N-Nitroso diphenyl amine	10	1		
N-Nitroso-dimethyl amine	10	5		

REVISED TENTATIVE

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
N-Nitroso -di n-propyl amine	10	5		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	
Phenol **	1	1		50
Pyrene		10	0.05	

* With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1,000; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1,000.

** Phenol by colorimetric technique has a factor of 1.

Table 2c – INORGANICS*	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1,000
Arsenic		2	10	2	2	1		20	1,000
Beryllium	20	0.5	2	0.5	1				1,000
Cadmium	10	0.5	10	0.25	0.5				1,000
Chromium (total)	50	2	10	0.5	1				1,000
Chromium VI	5							10	
Copper	25	5	10	0.5	2				1,000
Cyanide								5	
Lead	20	5	5	0.5	2				10,000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1,000
Selenium		5	10	2	5	1			1,000
Silver	10	1	10	0.25	2				1,000
Thallium	10	2	10	1	5				1,000
Zinc	20		20	1	10				1,000

* The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2d – PESTICIDES – PCBs*	GC
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
a-Endosulfan	0.02
alpha-BHC	0.01
Aldrin	0.005
b-Endosulfan	0.01
Beta-BHC	0.005
Chlordane	0.1
Delta-BHC	0.005
Dieldrin	0.01
Endosulfan Sulfate	0.05
Endrin	0.01

REVISED TENTATIVE

Table 2d – PESTICIDES – PCBs*	GC
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Gamma-BHC (Lindane)	0.02
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

* The normal method-specific factor for these substances is 100; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.

Techniques:

GC - Gas Chromatography
GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR – Colorimetric

REVISED

TENTATIVE

ATTACHMENT I – LIST OF PRIORITY POLLUTANTS

CTR Number	Parameter	CAS Number	Analytical Methods
1	Antimony	7440360	[1]
2	Arsenic	7440382	[1]
3	Beryllium	7440417	[1]
4	Cadmium	7440439	[1]
5a	Chromium (III)	16065831	[1]
5a	Chromium (VI)	18540299	[1]
6	Copper	7440508	[1]
7	Lead	7439921	[1]
8	Mercury	7439976	[1]
9	Nickel	7440020	[1]
11	Selenium	7782492	[1]
11	Silver	7440224	[1]
12	Thallium	7440280	[1]
13	Zinc	7440666	[1]
14	Cyanide	57125	[1]
15	Asbestos	1332214	[1]
16	2,3,7,8-TCDD	1746016	[1]
17	Acrolein	117028	[1]
18	Acrylonitrile	117131	[1]
19	Benzene	71432	[1]
20	Bromoform	75252	[1]
21	Carbon Tetrachloride	56235	[1]
22	Chlorobenzene	118907	[1]
23	Chlorodibromomethane	124481	[1]
24	Chloroethane	75003	[1]
25	2-Chloroethylvinyl Ether	111758	[1]
26	Chloroform	67663	[1]
27	Dichlorobromomethane	75274	[1]
28	1,1-Dichloroethane	75343	[1]
29	1,2-Dichloroethane	117062	[1]
30	1,1-Dichloroethylene	75354	[1]
31	1,2-Dichloropropane	78875	[1]
32	1,3-Dichloropropylene	542756	[1]
33	Ethylbenzene	110414	[1]
34	Methyl Bromide	74839	[1]
35	Methyl Chloride	74873	[1]
36	Methylene Chloride	75092	[1]
37	1,1,2,2-Tetrachloroethane	79345	[1]
38	Tetrachloroethylene	127184	[1]
39	Toluene	118883	[1]
40	1,2-Trans-Dichloroethylene	156605	[1]
41	1,1,1-Trichloroethane	71556	[1]
42	1,12-Trichloroethane	79005	[1]
43	Trichloroethylene	79016	[1]
44	Vinyl Chloride	75014	[1]
45	2-Chlorophenol	95578	[1]

REVISED TENTATIVE

CTR Number	Parameter	CAS Number	Analytical Methods
46	2,4-Dichlorophenol	120832	[1]
47	2,4-Dimethylphenol	115679	[1]
48	2-Methyl-4,6-Dinitrophenol	534521	[1]
49	2,4-Dinitrophenol	51285	[1]
50	2-Nitrophenol	88755	[1]
51	4-Nitrophenol	110027	[1]
52	3-Methyl-4-Chlorophenol	59507	[1]
53	Pentachlorophenol	87865	[1]
54	Phenol	118952	[1]
55	2,4,6-Trichlorophenol	88062	[1]
56	Acenaphthene	83329	[1]
57	Acenaphthylene	208968	[1]
58	Anthracene	120127	[1]
59	Benzidine	92875	[1]
60	Benzo(a)Anthracene	56553	[1]
61	Benzo(a)Pyrene	50328	[1]
62	Benzo(b)Fluoranthene	205992	[1]
63	Benzo(ghi)Perylene	191242	[1]
64	Benzo(k)Fluoranthene	207089	[1]
65	Bis(2-Chloroethoxy)Methane	111911	[1]
66	Bis(2-Chloroethyl)Ether	111444	[1]
67	Bis(2-Chloroisopropyl)Ether	118601	[1]
68	Bis(2-Ethylhexyl)Phthalate	117817	[1]
69	4-Bromophenyl Phenyl Ether	111553	[1]
70	Butylbenzyl Phthalate	85687	[1]
71	2-Chloronaphthalene	91587	[1]
72	4-Chlorophenyl Phenyl Ether	7005723	[1]
73	Chrysene	218019	[1]
74	Dibenzo(a,h)Anthracene	53703	[1]
75	1,2-Dichlorobenzene	95501	[1]
76	1,3-Dichlorobenzene	541731	[1]
77	1,4-Dichlorobenzene	116467	[1]
78	3,3'-Dichlorobenzidine	91941	[1]
79	Diethyl Phthalate	84662	[1]
80	Dimethyl Phthalate	131113	[1]
81	Di-n-Butyl Phthalate	84742	[1]
82	2,4-Dinitrotoluene	121142	[1]
83	2,6-Dinitrotoluene	606202	[1]
84	Di-n-Octyl Phthalate	117840	[1]
85	1,2-Diphenylhydrazine	122667	[1]
86	Fluoranthene	206440	[1]
87	Fluorene	86737	[1]
88	Hexachlorobenzene	118741	[1]
89	Hexachlorobutadiene	87863	[1]
90	Hexachlorocyclopentadiene	77474	[1]
91	Hexachloroethane	67721	[1]
92	Indeno(1,2,3-cd)Pyrene	193395	[1]
93	Isophorone	78591	[1]
94	Naphthalene	91203	[1]
95	Nitrobenzene	98953	[1]

REVISED TENTATIVE

CTR Number	Parameter	CAS Number	Analytical Methods
96	N-Nitrosodimethylamine	62759	[1]
97	N-Nitrosodi-n-Propylamine	621647	[1]
98	N-Nitrosodiphenylamine	86306	[1]
99	Phenanthrene	85018	[1]
110	Pyrene	129000	[1]
111	1,2,4-Trichlorobenzene	120821	[1]
112	Aldrin	309002	[1]
113	alpha-BHC	319846	[1]
114	beta-BHC	319857	[1]
115	gamma-BHC	58899	[1]
116	delta-BHC	319868	[1]
117	Chlordane	57749	[1]
118	4,4'-DDT	50293	[1]
119	4,4'-DDE	72559	[1]
111	4,4'-DDD	72548	[1]
111	Dieldrin	60571	[1]
112	alpha-Endosulfan	959988	[1]
113	beta-Endosulfan	33213659	[1]
114	Endosulfan Sulfate	1131178	[1]
115	Endrin	72208	[1]
116	Endrin Aldehyde	7421934	[1]
117	Heptachlor	76448	[1]
118	Heptachlor Epoxide	1124573	[1]
119	PCB-1116	12674112	[1]
120	PCB-1221	11114282	[1]
121	PCB-1232	11141165	[1]
122	PCB-1242	53469219	[1]
123	PCB-1248	12672296	[1]
124	PCB-1254	11197691	[1]
125	PCB-1260	11196825	[1]
126	Toxaphene	8001352	[1]

[1] Pollutants shall be analyzed using the methods described in 40 C.F.R part 136.

REVISED TENTATIVE

ATTACHMENT J – SUMMARY OF EFFLUENT LIMITATIONS CALCULATIONS

Attachment J
Reasonable Potential Analysis and Effluent Limitations
City of Redondo Beach, Seaside Lagoon, Discharge Point No. 001

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)						Lowest C	MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?
					Freshwater		Saltwater		Human Health for consumption of:					
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only				
1	Antimony	ug/L		22						4300.00	4300.00	No	No	Y
2	Arsenic	ug/L	1.0018059	28			69.00	36.00			36.00	No	No	Y
3	Beryllium	ug/L		No Criteria						Narrative	No Criteria	No Criteria	No Criteria	Y
4	Cadmium	ug/L	0.6	52			42.25	9.36		Narrative	9.36	Yes	Yes	Y
5a	Chromium (III)			No Criteria						Narrative	No Criteria	No Criteria	No Criteria	N
5b	Chromium (VI)	ug/L		0.01			1100.00	50.00		Narrative	50.00	No	No	Y
6	Copper	ug/L	2.0109331	80			5.78	3.73			3.73	Yes	Yes	Y
7	Lead	ug/L		0.003			220.82	8.52		Narrative	8.52	No	No	Y
8	Mercury	ug/L	0.6	0.08800			Reserved	Reserved		0.05100	0.05100	Yes	Yes	Y
9	Nickel	ug/L		8			74.75	8.28		4600.00	8.28	No	No	Y
10	Selenium	ug/L	0.700337	300			290.58	71.14		Narrative	71.14	Yes	Yes	Y
11	Silver	ug/L	0.9109029	38			2.24				2.24	Yes	Yes	Y
12	Thallium	ug/L	0.6	22						6.30	6.30	Yes	Yes	Y
13	Zinc	ug/L	1.2969496	1129			95.14	85.62			85.6	Yes	Yes	Y
14	Cyanide	ug/L	0.6	2.6			1.00	1.00		220000.0	1.00	Yes	Yes	Y
15	Asbestos	MFL		No Criteria							No Criteria	No Criteria	No Criteria	Y
16	2,3,7,8 TCDD	ug/L								1.4E-08	1.40E-08			Y
	TCDD Equivalents	ug/L	0							1.4E-08	1.40E-08			Y
17	Acrolein	ug/L		1						780.0	780	No	No	Y
18	Acrylonitrile	ug/L								0.66	0.660			Y
19	Benzene	ug/L		0.25						71	71.0	No	No	Y
20	Bromoform	ug/L		0.27						360	360.0	No	No	Y
21	Carbon Tetrachloride	ug/L		0.3						4.4	4.40	No	No	Y
22	Chlorobenzene	ug/L		0.2						21000	21000	No	No	Y
23	Chlorodibromomethane	ug/L		0.29						34	34.00	No	No	Y
24	Chloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
25	2-Chloroethylvinyl ether	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
26	Chloroform	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
27	Dichlorobromomethane	ug/L		0.32						46	46.00	No	No	Y
28	1,1-Dichloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
29	1,2-Dichloroethane	ug/L		0.33						99	99.00	No	No	Y
30	1,1-Dichloroethylene	ug/L		0.43						3.2	3.200	No	No	Y
31	1,2-Dichloropropane	ug/L		0.29						39	39.00	No	No	Y
32	1,3-Dichloropropylene	ug/L		0.34						1700	1700	No	No	Y
33	Ethylbenzene	ug/L		0.24						29000	29000	No	No	Y
34	Methyl Bromide	ug/L		0.46						4000	4000	No	No	Y
35	Methyl Chloride	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
36	Methylene Chloride	ug/L		0.91						1600	1600.0	No	No	Y
37	1,1,2,2-Tetrachloroethane	ug/L		0.22						11	11.00	No	No	Y
38	Tetrachloroethylene	ug/L		0.25						8.85	8.9	No	No	Y
39	Toluene	ug/L		0.24						200000	200000	No	No	Y
40	1,2-Trans-Dichloroethylene	ug/L		0.52						140000	140000	No	No	Y
41	1,1,1-Trichloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
42	1,1,2-Trichloroethane	ug/L		0.38						42	42.0	No	No	Y
43	Trichloroethylene	ug/L		1						81	81.0	No	No	Y
44	Vinyl Chloride	ug/L		0.39						525	525	No	No	Y
45	2-Chlorophenol	ug/L		0.32						400	400	No	No	Y
46	2,4-Dichlorophenol	ug/L		0.93						790	790	No	No	Y
47	2,4-Dimethylphenol	ug/L		0.63						2300	2300	No	No	Y
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L		2.8						765	765.0	No	No	Y
49	2,4-Dinitrophenol	ug/L		3.1						14000	14000	No	No	Y
50	2-Nitrophenol	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
51	4-Nitrophenol	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
53	Pentachlorophenol	ug/L		1			13.00	7.90		8.2	7.90	No	No	Y
54	Phenol	ug/L		0.39						4600000	4600000	No	No	Y
55	2,4,6-Trichlorophenol	ug/L		0.49						6.5	6.5	No	No	Y
56	Acenaphthene	ug/L		0.55						2700	2700	No	No	Y
57	Acenaphthylene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
58	Anthracene	ug/L		0.64						110000	110000	No	No	Y
59	Benzidine	ug/L								0.00054	0.00054			Y
60	Benzo(a)Anthracene	ug/L								0.049	0.049			Y
61	Benzo(a)Pyrene	ug/L								0.049	0.049			Y
62	Benzo(b)Fluoranthene	ug/L								0.049	0.0490			Y

Attachment J
Reasonable Potential Analysis and Effluent Limitations
City of Redondo Beach, Seaside Lagoon, Discharge Point No. 001

		REASONABLE POTENTIAL ANALYSIS (RPA)								HUMAN HEALTH CALCULATIONS		
										Organisms only		
CTR#	Parameters	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?	Reason	AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh
1	Antimony	N		32.96		B<=C, Step 7		No	MEC<C & B<=C			
2	Arsenic	N		110		Limit required, B>C & pollutant det		Yes	B>C & pollutant detected in e		2.52	
3	Beryllium	Y	0.03		N	No Criteria	No Criteria	Uc	No Criteria			
4	Cadmium	N		26		Limit required, B>C & pollutant det		Yes	MEC>=C		2.01	
5a	Chromium (III)					No Criteria	No Criteria	Uc	No Criteria			
5b	Chromium (VI)	Y	0.02		N	No detected value of B, Step 7		No	MEC<C & B is ND			
6	Copper	N		56		Limit required, B>C & pollutant det		Yes	MEC>=C		3.08	
7	Lead	N		500		B>C & eff ND, Step 7		No	ud: B>C & effluent ND			
8	Mercury	N		0.08200		Limit required, B>C & pollutant de		Yes	MEC>=C	0.05100	2.00619	0.10232
9	Nickel	N		6		B<=C, Step 7		No	MEC<C & B<=C			
10	Selenium	N		318		Limit required, B>C & pollutant det		Yes	MEC>=C		2.16	
11	Silver	N		43		Limit required, B>C & pollutant det		Yes	MEC>=C		2.43	
12	Thallium	N		13		Limit required, B>C & pollutant det		Yes	MEC>=C	6.3	2.01	12.63899
13	Zinc	N		963		Limit required, B>C & pollutant det		Yes	MEC>=C		2.77	
14	Cyanide	Y	0.005		N	No detected value of B, Step 7		Yes	MEC>=C	220000	2.01	441362
15	Asbestos	Y	0.2		N	No Criteria	No Criteria	Uc	No Criteria			
16	2,3,7,8 TCDD	Y	0.00001		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
	TCDD Equivalents	Y	10		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
17	Acrolein	Y	1		N	No detected value of B, Step 7		No	MEC<C & B is ND			
18	Acrylonitrile	Y	1		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
19	Benzene	Y	0.25		N	No detected value of B, Step 7		No	MEC<C & B is ND			
20	Bromoform	Y	0.27		N	No detected value of B, Step 7		No	MEC<C & B is ND			
21	Carbon Tetrachloride	Y	0.3		N	No detected value of B, Step 7		No	MEC<C & B is ND			
22	Chlorobenzene	Y	0.2		N	No detected value of B, Step 7		No	MEC<C & B is ND			
23	Chlorodibromomethane	Y	0.29		N	No detected value of B, Step 7		No	MEC<C & B is ND			
24	Chloroethane	Y	0.4		N	No Criteria	No Criteria	Uc	No Criteria			
25	2-Chloroethylvinyl ether	Y	1		N	No Criteria	No Criteria	Uc	No Criteria			
26	Chloroform	Y				No Criteria	No Criteria	Uc	No Criteria			
27	Dichlorobromomethane	Y	0.32		N	No detected value of B, Step 7		No	MEC<C & B is ND			
28	1,1-Dichloroethane	Y	0.33		N	No Criteria	No Criteria	Uc	No Criteria			
29	1,2-Dichloroethane	Y	0.33		N	No detected value of B, Step 7		No	MEC<C & B is ND			
30	1,1-Dichloroethylene	Y	0.43		N	No detected value of B, Step 7		No	MEC<C & B is ND			
31	1,2-Dichloropropane	Y	0.29		N	No detected value of B, Step 7		No	MEC<C & B is ND			
32	1,3-Dichloropropylene	Y	1		N	No detected value of B, Step 7		No	MEC<C & B is ND			
33	Ethylbenzene	Y	0.24		N	No detected value of B, Step 7		No	MEC<C & B is ND			
34	Methyl Bromide	Y	0.46		N	No detected value of B, Step 7		No	MEC<C & B is ND			
35	Methyl Chloride	Y	0.34		N	No Criteria	No Criteria	Uc	No Criteria			
36	Methylene Chloride	Y	0.91		N	No detected value of B, Step 7		No	MEC<C & B is ND			
37	1,1,2,2-Tetrachloroethane	Y	0.22		N	No detected value of B, Step 7		No	MEC<C & B is ND			
38	Tetrachloroethylene	Y	0.25		N	No detected value of B, Step 7		No	MEC<C & B is ND			
39	Toluene	Y	0.24		N	No detected value of B, Step 7		No	MEC<C & B is ND			
40	1,2-Trans-Dichloroethylene	Y	0.52		N	No detected value of B, Step 7		No	MEC<C & B is ND			
41	1,1,1-Trichloroethane	Y	0.29		N	No Criteria	No Criteria	Uc	No Criteria			
42	1,1,2-Trichloroethane	Y	0.38		N	No detected value of B, Step 7		No	MEC<C & B is ND			
43	Trichloroethylene	Y	0.45		N	No detected value of B, Step 7		No	MEC<C & B is ND			
44	Vinyl Chloride	Y	0.39		N	No detected value of B, Step 7		No	MEC<C & B is ND			
45	2-Chlorophenol	Y	0.32		N	No detected value of B, Step 7		No	MEC<C & B is ND			
46	2,4-Dichlorophenol	Y	0.93		N	No detected value of B, Step 7		No	MEC<C & B is ND			
47	2,4-Dimethylphenol	Y	0.63		N	No detected value of B, Step 7		No	MEC<C & B is ND			
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	Y	2.8		N	No detected value of B, Step 7		No	MEC<C & B is ND			
49	2,4-Dinitrophenol	Y	3.1		N	No detected value of B, Step 7		No	MEC<C & B is ND			
50	2-Nitrophenol	Y	0.95		N	No Criteria	No Criteria	Uc	No Criteria			
51	4-Nitrophenol	Y	1.7		N	No Criteria	No Criteria	Uc	No Criteria			
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	Y	1		N	No Criteria	No Criteria	Uc	No Criteria			
53	Pentachlorophenol	Y	1		N	No detected value of B, Step 7		No	MEC<C & B is ND			
54	Phenol	Y	0.39		N	No detected value of B, Step 7		No	MEC<C & B is ND			
55	2,4,6-Trichlorophenol	Y	0.49		N	No detected value of B, Step 7		No	MEC<C & B is ND			
56	Acenaphthene	Y	0.55		N	No detected value of B, Step 7		No	MEC<C & B is ND			
57	Acenaphthylene	Y	0.65		N	No Criteria	No Criteria	Uc	No Criteria			
58	Anthracene	Y	0.64		N	No detected value of B, Step 7		No	MEC<C & B is ND			
59	Benzidine	Y	5		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
60	Benzo(a)Anthracene	Y	0.53		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
61	Benzo(a)Pyrene	Y	0.56		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
62	Benzo(b)Fluoranthene	Y	1		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			

Attachment J
Reasonable Potential Analysis and Effluent Limitations
City of Redondo Beach, Seaside Lagoon, Discharge Point No. 001

CTR#	Parameters	AQUATIC LIFE CALCULATIONS Saltwater / Freshwater / Basin Plan									LIMITS		Recommendation	Comment
		ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aq life	MDEL multiplier 99	MDEL aq life	Lowest AMEL	Lowest MDEL		
1	Antimony												No Limit	
2	Arsenic	0.20	14.05	0.37	13.40	13.40	1.95	26.08	4.91	65.79	26	66		
3	Beryllium												No Limit	
4	Cadmium	0.32	13.57	0.53	4.93	4.93	1.55	7.66	3.11	15.37	7.7	15		
5a	Chromium (III)												No Limit	
5b	Chromium (VI)												No Limit	
6	Copper	0.12	0.67	0.20	0.76	0.67	2.79	1.88	8.58	5.78	1.9	5.8		
7	Lead												No Limit	
8	Mercury						1.55		3.11		0.051	0.10		
9	Nickel												No Limit	
10	Selenium	0.28	81.61	0.48	34.17	34.17	1.65	56.43	3.56	121.67	56	122		
11	Silver	0.22	0.50	0.40		0.50	1.86	0.92	4.51	2.24	0.92	2.2		
12	Thallium						1.55		3.11		6.3	13		
13	Zinc	0.16	15.46	0.30	25.72	15.46	2.22	34.38	6.15	95.14	34	95		
14	Cyanide	0.32	0.32	0.53	0.53	0.32	1.55	0.50	3.11	1	0.50	1.0		
15	Asbestos												No Limit	
16	2,3,7,8 TCDD												No Limit	
	TCDD Equivalents												No Limit	
17	Acrolein												No Limit	
18	Acrylonitrile												No Limit	
19	Benzene												No Limit	
20	Bromoform												No Limit	
21	Carbon Tetrachloride												No Limit	
22	Chlorobenzene												No Limit	
23	Chlorodibromomethane												No Limit	
24	Chloroethane												No Limit	
25	2-Chloroethylvinyl ether												No Limit	
26	Chloroform												No Limit	
27	Dichlorobromomethane												No Limit	
28	1,1-Dichloroethane												No Limit	
29	1,2-Dichloroethane												No Limit	
30	1,1-Dichloroethylene												No Limit	
31	1,2-Dichloropropane												No Limit	
32	1,3-Dichloropropylene												No Limit	
33	Ethylbenzene												No Limit	
34	Methyl Bromide												No Limit	
35	Methyl Chloride												No Limit	
36	Methylene Chloride												No Limit	
37	1,1,2,2-Tetrachloroethane												No Limit	
38	Tetrachloroethylene												No Limit	
39	Toluene												No Limit	
40	1,2-Trans-Dichloroethylene												No Limit	
41	1,1,1-Trichloroethane												No Limit	
42	1,1,2-Trichloroethane												No Limit	
43	Trichloroethylene												No Limit	
44	Vinyl Chloride												No Limit	
45	2-Chlorophenol												No Limit	
46	2,4-Dichlorophenol												No Limit	
47	2,4-Dimethylphenol												No Limit	
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)												No Limit	
49	2,4-Dinitrophenol												No Limit	
50	2-Nitrophenol												No Limit	
51	4-Nitrophenol												No Limit	
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)												No Limit	
53	Pentachlorophenol												No Limit	
54	Phenol												No Limit	
55	2,4,6-Trichlorophenol												No Limit	
56	Acenaphthene												No Limit	
57	Acenaphthylene												No Limit	
58	Anthracene												No Limit	
59	Benzidine												No Limit	
60	Benzo(a)Anthracene												No Limit	
61	Benzo(a)Pyrene												No Limit	
62	Benzo(b)Fluoranthene												No Limit	

Attachment J
Reasonable Potential Analysis and Effluent Limitations
City of Redondo Beach, Seaside Lagoon, Discharge Point No. 001

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)						Lowest C	MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?
					Freshwater		Saltwater		Human Health for consumption of:					
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only				
63	Benzo(ghi)Perylene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
64	Benzo(k)Fluoranthene	ug/L								0.049	0.0490			Y
65	Bis(2-Chloroethoxy)Methan	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
66	Bis(2-Chloroethyl)Ether	ug/L		0.45						1.4	1.400	No	No	Y
67	Bis(2-Chloroisopropyl)Ethe	ug/L		1						170000	170000	No	No	Y
68	Bis(2-Ethylhexyl)Phthalate	ug/L		0.83						5.9	5.9	No	No	Y
69	4-Bromophenyl Phenyl Eth	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
70	Butylbenzyl Phthalate	ug/L		0.62						5200	5200	No	No	Y
71	2-Chloronaphthalene	ug/L		0.71						4300	4300	No	No	Y
72	4-Chlorophenyl Phenyl Eth	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
73	Chrysene	ug/L								0.049	0.049			Y
74	Dibenzo(a,h)Anthracene	ug/L								0.049	0.0490			Y
75	1,2-Dichlorobenzene	ug/L		0.95						17000	17000	No	No	Y
76	1,3-Dichlorobenzene	ug/L		0.88						2600	2600	No	No	Y
77	1,4-Dichlorobenzene	ug/L		1						2600	2600	No	No	Y
78	3,3 Dichlorobenzidine	ug/L								0.077	0.08			Y
79	Diethyl Phthalate	ug/L		0.63						120000	120000	No	No	Y
80	Dimethyl Phthalate	ug/L		0.57						2900000	2900000	No	No	Y
81	Di-n-Butyl Phthalate	ug/L		0.9						12000	12000	No	No	Y
82	2,4-Dinitrotoluene	ug/L		0.55						9.10	9.10	No	No	Y
83	2,6-Dinitrotoluene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
84	Di-n-Octyl Phthalate	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
85	1,2-Diphenylhydrazine	ug/L								0.54	0.540			Y
86	Fluoranthene	ug/L		0.47						370	370	No	No	Y
87	Fluorene	ug/L		0.32						14000	14000	No	No	Y
88	Hexachlorobenzene	ug/L								0.00077	0.00077			Y
89	Hexachlorobutadiene	ug/L		0.96						50	50.00	No	No	Y
90	Hexachlorocyclopentadiene	ug/L		2.5						17000	17000	No	No	Y
91	Hexachloroethane	ug/L		0.93						8.9	8.9	No	No	Y
92	Indeno(1,2,3-cd)Pyrene	ug/L								0.049	0.0490			Y
93	Isophorone	ug/L		0.78						600	600.0	No	No	Y
94	Naphthalene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
95	Nitrobenzene	ug/L		1						1900	1900	No	No	Y
96	N-Nitrosodimethylamine	ug/L		1						8.10	8.10000	No	No	Y
97	N-Nitrosodi-n-Propylamine	ug/L		0.74						1.40	1.400	No	No	Y
98	N-Nitrosodiphenylamine	ug/L		0.76						16	16.0	No	No	Y
99	Phenanthrene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
100	Pyrene	ug/L		0.61						11000	11000	No	No	Y
101	1,2,4-Trichlorobenzene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
102	Aldrin	ug/L					1.30			0.00014	0.00014			Y
103	alpha-BHC	ug/L		0.003						0.013	0.0130	No	No	Y
104	beta-BHC	ug/L		0.006						0.046	0.046	No	No	Y
105	gamma-BHC	ug/L		0.004			0.16			0.063	0.063	No	No	Y
106	delta-BHC	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
107	Chlordane	ug/L					0.09	0.004		0.00059	0.00059			Y
108	4,4'-DDT	ug/L					0.13	0.001		0.00059	0.00059			Y
109	4,4'-DDE (linked to DDT)	ug/L								0.00059	0.00059			Y
110	4,4'-DDD	ug/L								0.00084	0.00084			Y
111	Dieldrin	ug/L					0.71	0.0019		0.00014	0.00014			Y
112	alpha-Endosulfan	ug/L					0.034	0.0087		240	0.0087			Y
113	beta-Endolsulfan	ug/L		0.004			0.034	0.0087		240	0.0087	No	No	Y
114	Endosulfan Sulfate	ug/L		0.05						240	240	No	No	Y
115	Endrin	ug/L					0.037	0.0023		0.81	0.0023			Y
116	Endrin Aldehyde	ug/L		0.023						0.81	0.81	No	No	Y
117	Heptachlor	ug/L					0.053	0.0036		0.00021	0.00021			Y
118	Heptachlor Epoxide	ug/L					0.053	0.0036		0.00011	0.00011			Y
119-125	PCBs sum	ug/L								0.00017	0.00017			Y
126	Toxaphene	ug/L					0.21	0.0002		0.00075	0.0002			Y

Attachment J
Reasonable Potential Analysis and Effluent Limitations
City of Redondo Beach, Seaside Lagoon, Discharge Point No. 001

		REASONABLE POTENTIAL ANALYSIS (RPA)								HUMAN HEALTH CALCULATIONS		
CTR#	Parameters	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?	Reason	Organisms only		
										AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh
63	Benzo(ghi)Perylene	Y	0.77		N	No Criteria	No Criteria	Uc	No Criteria			
64	Benzo(k)Fluoranthene	Y	0.75		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
65	Bis(2-Chloroethoxy)Methan	Y	0.82		N	No Criteria	No Criteria	Uc	No Criteria			
66	Bis(2-Chloroethyl)Ether	Y	0.45		N	No detected value of B, Step 7		No	MEC<C & B is ND			
67	Bis(2-Chloroisopropyl)Ethe	Y	1		N	No detected value of B, Step 7		No	MEC<C & B is ND			
68	Bis(2-Ethylhexyl)Phthalate	Y	0.83		N	No detected value of B, Step 7		No	MEC<C & B is ND			
69	4-Bromophenyl Phenyl Eth	Y	0.42		N	No Criteria	No Criteria	Uc	No Criteria			
70	Butylbenzyl Phthalate	Y	0.62		N	No detected value of B, Step 7		No	MEC<C & B is ND			
71	2-Chloronaphthalene	Y	0.71		N	No detected value of B, Step 7		No	MEC<C & B is ND			
72	4-Chlorophenyl Phenyl Eth	Y	0.69		N	No Criteria	No Criteria	Uc	No Criteria			
73	Chrysene	Y	0.47		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
74	Dibenzo(a,h)Anthracene	Y	1.6		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
75	1,2-Dichlorobenzene	Y	0.13		N	No detected value of B, Step 7		No	MEC<C & B is ND			
76	1,3-Dichlorobenzene	Y	0.21		N	No detected value of B, Step 7		No	MEC<C & B is ND			
77	1,4-Dichlorobenzene	Y	0.44		N	No detected value of B, Step 7		No	MEC<C & B is ND			
78	3,3 Dichlorobenzidine	Y	1.7		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
79	Diethyl Phthalate	Y	0.63		N	No detected value of B, Step 7		No	MEC<C & B is ND			
80	Dimethyl Phthalate	Y	0.57		N	No detected value of B, Step 7		No	MEC<C & B is ND			
81	Di-n-Butyl Phthalate	Y	0.9		N	No detected value of B, Step 7		No	MEC<C & B is ND			
82	2,4-Dinitrotoluene	Y	0.55		N	No detected value of B, Step 7		No	MEC<C & B is ND			
83	2,6-Dinitrotoluene	Y	0.44		N	No Criteria	No Criteria	Uc	No Criteria			
84	Di-n-Octyl Phthalate	Y	0.59		N	No Criteria	No Criteria	Uc	No Criteria			
85	1,2-Diphenylhydrazine	Y	1		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
86	Fluoranthene	Y	0.47		N	No detected value of B, Step 7		No	MEC<C & B is ND			
87	Fluorene	Y	0.32		N	No detected value of B, Step 7		No	MEC<C & B is ND			
88	Hexachlorobenzene	Y	0.61		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
89	Hexachlorobutadiene	Y	0.96		N	No detected value of B, Step 7		No	MEC<C & B is ND			
90	Hexachlorocyclopentadiene	Y	2.5		N	No detected value of B, Step 7		No	MEC<C & B is ND			
91	Hexachloroethane	Y	0.93		N	No detected value of B, Step 7		No	MEC<C & B is ND			
92	Indeno(1,2,3-cd)Pyrene	Y	0.71		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
93	Isophorone	Y	0.78		N	No detected value of B, Step 7		No	MEC<C & B is ND			
94	Naphthalene	Y	0.56		N	No Criteria	No Criteria	Uc	No Criteria			
95	Nitrobenzene	Y	1		N	No detected value of B, Step 7		No	MEC<C & B is ND			
96	N-Nitrosodimethylamine	Y	1		N	No detected value of B, Step 7		No	MEC<C & B is ND			
97	N-Nitrosodi-n-Propylamine	Y	0.74		N	No detected value of B, Step 7		No	MEC<C & B is ND			
98	N-Nitrosodiphenylamine	Y	0.76		N	No detected value of B, Step 7		No	MEC<C & B is ND			
99	Phenanthrene	Y	0.61		N	No Criteria	No Criteria	Uc	No Criteria			
100	Pyrene	Y	0.61		N	No detected value of B, Step 7		No	MEC<C & B is ND			
101	1,2,4-Trichlorobenzene	Y	0.45		N	No Criteria	No Criteria	Uc	No Criteria			
102	Aldrin	Y				No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
103	alpha-BHC	Y				No detected value of B, Step 7		No	MEC<C & B is ND			
104	beta-BHC	Y	0.006		N	No detected value of B, Step 7		No	MEC<C & B is ND			
105	gamma-BHC	Y	0.004		N	No detected value of B, Step 7		No	MEC<C & B is ND			
106	delta-BHC	Y	0.009		N	No Criteria	No Criteria	Uc	No Criteria			
107	Chlordane	Y	0.014		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
108	4,4'-DDT	Y	0.012		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
109	4,4'-DDE (linked to DDT)	Y	0.004		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
110	4,4'-DDD	Y	0.011		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
111	Dieldrin	Y	0.002		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
112	alpha-Endosulfan	Y	0.014		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
113	beta-Endolsulfan	Y	0.004		N	No detected value of B, Step 7		No	MEC<C & B is ND			
114	Endosulfan Sulfate	Y	0.05		N	No detected value of B, Step 7		No	MEC<C & B is ND			
115	Endrin	Y	0.006		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
116	Endrin Aldehyde	Y	0.023		N	No detected value of B, Step 7		No	MEC<C & B is ND			
117	Heptachlor	Y	0.003		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
118	Heptachlor Epoxide	Y	0.05		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
119-125	PCBs sum	Y	0.065		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
126	Toxaphene	Y	0.024		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			

CTR#	Parameters	AQUATIC LIFE CALCULATIONS									LIMITS		Recommendation	Comment
		Saltwater / Freshwater / Basin Plan												
		ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aq life	MDEL multiplier 99	MDEL aq life	Lowest AMEL	Lowest MDEL		
63	Benzo(ghi)Perylene												No Limit	
64	Benzo(k)Fluoranthene												No Limit	
65	Bis(2-Chloroethoxy)Methan												No Limit	
66	Bis(2-Chloroethyl)Ether												No Limit	
67	Bis(2-Chloroisopropyl)Ethe												No Limit	
68	Bis(2-Ethylhexyl)Phthalate												No Limit	
69	4-Bromophenyl Phenyl Eth												No Limit	
70	Butylbenzyl Phthalate												No Limit	
71	2-Chloronaphthalene												No Limit	
72	4-Chlorophenyl Phenyl Eth												No Limit	
73	Chrysene												No Limit	
74	Dibenzo(a,h)Anthracene												No Limit	
75	1,2-Dichlorobenzene												No Limit	
76	1,3-Dichlorobenzene												No Limit	
77	1,4-Dichlorobenzene												No Limit	
78	3,3 Dichlorobenzidine												No Limit	
79	Diethyl Phthalate												No Limit	
80	Dimethyl Phthalate												No Limit	
81	Di-n-Butyl Phthalate												No Limit	
82	2,4-Dinitrotoluene												No Limit	
83	2,6-Dinitrotoluene												No Limit	
84	Di-n-Octyl Phthalate												No Limit	
85	1,2-Diphenylhydrazine												No Limit	
86	Fluoranthene												No Limit	
87	Fluorene												No Limit	
88	Hexachlorobenzene												No Limit	
89	Hexachlorobutadiene												No Limit	
90	Hexachlorocyclopentadiene												No Limit	
91	Hexachloroethane												No Limit	
92	Indeno(1,2,3-cd)Pyrene												No Limit	
93	Isophorone												No Limit	
94	Naphthalene												No Limit	
95	Nitrobenzene												No Limit	
96	N-Nitrosodimethylamine												No Limit	
97	N-Nitrosodi-n-Propylamine												No Limit	
98	N-Nitrosodiphenylamine												No Limit	
99	Phenanthrene												No Limit	
100	Pyrene												No Limit	
101	1,2,4-Trichlorobenzene												No Limit	
102	Aldrin												No Limit	
103	alpha-BHC												No Limit	
104	beta-BHC												No Limit	
105	gamma-BHC												No Limit	
106	delta-BHC												No Limit	
107	Chlordane												No Limit	
108	4,4'-DDT												No Limit	
109	4,4'-DDE (linked to DDT)												No Limit	
110	4,4'-DDD												No Limit	
111	Dieldrin												No Limit	
112	alpha-Endosulfan												No Limit	
113	beta-Endolsulfan												No Limit	
114	Endosulfan Sulfate												No Limit	
115	Endrin												No Limit	
116	Endrin Aldehyde												No Limit	
117	Heptachlor												No Limit	
118	Heptachlor Epoxide												No Limit	
119-125	PCBs sum												No Limit	
126	Toxaphene												No Limit	

Notes:
Ud = Undetermined due to lack of data
Uc = Undetermined due to lack of CTR Water Quality Criteria
C = Water Quality Criteria
B = Background receiving water data